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SIMULATING FOOD STAMP PROGRAM PARTICIPATION USING SINGLE-MONTH AND MULTIPLE-MONTH DATA

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EXECUTIVE SUMMARY

The MATH[©] SIPP model simulates eligibility for and participation in the FSP on the basis of a household's circumstances as reported in a single month of the SIPP. Although the SIPP provides more than one month of data for each sample household, this single-month approach generally is consistent with the way a caseworker determines eligibility for the FSP and other public assistance programs. Nevertheless, simulating eligibility and participation on the basis of a single month of data from a household survey may present a myopic picture of a household's true circumstances and the factors underlying their participation decision, particularly for households that are eligible but do not report food stamps and households that report food stamps but appear ineligible. For these households, simulating eligibility for and participation in the FSP on the basis of multiple months of data may be preferable.

This report examines the relationship between single-month and multiple-month eligibility for and participation in the FSP to improve how the MATH[®] SIPP microsimulation model determines a household's eligibility for and participation in the FSP and to improve our understanding of the current estimates of FSP participation rates.

RESEARCH OBJECTIVES

The basic objective of this report is to draw upon the research and data on the dynamics of poverty, eligibility, and participation to develop more accurate estimates of FSP eligibility and participation. To meet this objective, we address the following four questions:

- What proportion of the eligibles identified in a single month simulation have very short spells and other experiences associated with a transition rather than poverty?
- (2) How can the modeling of participation be improved by better distinguishing between those eligibles who are *likely to participate* and those who may appear to be eligible but who are *not likely to participate*.
- (3) Is the use of single-month data to estimate eligibility the best approach? Would some short-term smoothing of the income used in eligibility simulations improve the consistency between reported participation and simulated eligibility?
- (4) To what extent do estimates of eligibility vary according to the month that is chosen as the basis of the cross-section estimate?

DATA AND METHODOLOGY

The basic approach of the analyses for this report is to take a string of months from SIPP data and simulate FSP eligibility and participation in each of those months in comparison to a single base month. We use the January 1992 MATH[®] SIPP microsimulation model to simulate FSP eligibility and participation in each of the analysis months of the SIPP longitudinal file. We modified the SIPP

longitudinal file somewhat, though, because the MATH® SIPP model was designed to run on the MATH® SIPP database, which is different in structure and content from the SIPP longitudinal file Henceforth, we refer to the modified SIPP longitudinal file as the multiple-month analysis file.

We address the first research question--what proportion of the eligibles identified in a single month simulation have very short spells and other experiences associated with a transition rather than poverty-by analyzing FSP eligibility and participation in January 1992 and during the months before and after January 1992 using the multiple-month analysis file developed for this report. We analyze eligibility and participation for the following groups of potentially eligible FSP units: all eligibles in January 1992; eligibles who report receipt of food stamps in January 1992 (eligible reporters); eligibles who do not report receipt of food stamps in January 1992 (eligible nonreporters); and those that report receipt of food stamps in January 1992 but are seemingly ineligible (ineligible reporters).

We address the second research question--how the modeling of participation can be improved by better distinguishing between those eligibles who are likely and not likely to participate--by analyzing the longitudinal FSP eligibility and participation characteristics of the eligible nonreporters and the ineligible reporters, the two groups whose characteristics have the greatest implications for changing the current method of simulating participation in FCS's microsimulation models. Currently, underreporting of FSP participation in the SIPP is corrected in FCS's MATH® SIPP microsimulation models by selecting a portion of the eligible nonreporters to participate in the baseline FSP simulation. We assess whether we can identify the eligible nonreporters that, in fact, receive food stamps and whether selecting these persons to participate in the baseline improves the model. Similarly, we assess whether we can identify the ineligible reporters that, in fact, are eligible and whether selecting these persons to participate in the baseline improves the model.

We address the third research question--would some short-term smoothing of the income used in eligibility simulations improve the consistency between reported participation and simulated eligibility--by comparing FSP eligibility determined on the basis of a household income for single month with FSP eligibility determined on the basis of household income for an average of three months.

We address the fourth research question--to what extent do estimates of eligibility vary according to the month that is chosen as the basis of the cross-section estimate--by examining FSP eligibility rates for each month of the multiple-month file created for this report.

FINDINGS

We find that of all eligibles in the MATH[©] SIPP's simulation month, 76 percent are eligible for 9 months or more and 88 percent are eligible for 5 months or more. Among eligibles that report receipt of food stamps in the simulation month, 90 percent are eligible for 9 months or more and 96 percent are eligible for 5 months or more. Finally, among eligibles that do not report receipt of food stamps in the simulation month, 64 percent are eligible for 9 months or more and 81 percent are eligible for 5 months or more.

Of those eligible for 9 months or more, 55 percent report receipt of food stamps in the simulation month. Of those eligible for 5 months or more, 51 percent report receipt of food stamps in the simulation month. Finally, of those eligible for less then 5 months, 10 percent report receipt of food stamps in the simulation month.

Of all ineligible reporters in the simulation month, 47 percent report receipt of food stamps for 9 months or more. The proportion of ineligible reporters in the simulation month who report receipt of food stamps throughout the 9-month analysis period that are eligible for the FSP increases steadily as you move away from the simulation month in either direction. In the month before and after the simulation month, 19 percent and 15 percent are eligible for the FSP, respectively. These percentages rise to 31 percent and 21 percent in the four months before and after the simulation month, respectively.

After investigating how the modeling of participation could be improved by better distinguishing between those eligibles who are likely to participate and those who may appear to be eligible but who are not likely to participate, we found the following: (1) selecting eligible nonreporters based on the likelihood of actually receiving food stamps is not possible unless we know something about the characteristics of units that receive food stamps but fail to report receipt on SIPP, and (2) the benefits of selecting ineligible reporters based on the likelihood of actually being eligible do not outweigh the costs in terms of added complexity to the FSP baseline calibration process. Moreover, calibrating the model to select nonreporters based on the likelihood of actually receiving food stamps and to select ineligible reporters based on the likelihood of actually being eligible would probably result in a baseline that is less representative of the true FSP caseload than the baseline produced using the current calibration method.

We find that income smoothing or varying the simulation month does not improve the agreement between reported participation and simulated eligibility.

In conclusion, we do not recommend changing the current method of selecting participants for the MATH[®] SIPP baseline beyond calibrating the model so that it matches better the characteristics of the FSP caseload according administrative data. This is currently done for the 1994 MATH[®] SIPP model.

I. INTRODUCTION

The Food Stamp Program (FSP), administered by the United States Department of Agriculture's Food and Consumer Service (FCS), is the largest food assistance program in the U.S., serving 25.5 million persons and distributing \$24 billion in benefits in fiscal year 1996. To assess how well the program is reaching its intended population, policymakers need to know what proportion of the population eligible for the FSP actually participates and receives food stamps. Policymakers also need to know the effect on the FSP of proposed reforms to the FSP and other public assistance programs. To determine what proportion of the eligible population participates in the FSP and to determine the effect on the FSP of proposed reforms to the FSP and other public assistance programs, FCS uses microsimulation models. Microsimulation models simulate FSP eligibility and participation on a large sample of households that may be representative of either the FSP caseload only, as in the case of the QC Minimodel, or the entire U.S. population, as in the case of the MATH[©] CPS or MATH[©] SIPP microsimulation models.

Because FCS's microsimulation models are an important tool for FSP policymakers, the models and their underlying databases are continually evaluated and updated. This report evaluates an important aspect of FCS's MATH[®] SIPP microsimulation model. Specifically, this report examines the relationship between single-month and multiple-month eligibility for and participation in the FSP in order to improve how microsimulation models determine a household's eligibility for and participation in the FSP.

The MATH[®] SIPP model simulates eligibility for and participation in the FSP on the basis of a household's circumstances as reported in a single month of the SIPP. Although the SIPP provides more than one month of data for each sample household, this single-month approach generally is consistent with the way a caseworker determines eligibility for the FSP and other public assistance programs. Nevertheless, simulating eligibility and participation on the basis of a single month of data from a household survey may present a myopic picture of a household's true circumstances and the factors

underlying their participation decision, particularly for households that are eligible but do not report food stamps and households that report food stamps but appear ineligible. For these households, simulating eligibility for and participation in the FSP on the basis of multiple months of data may be preferable.

Research such as the studies by Bane and Ellwood (1983) and Ruggles and Williams (1987) show that there is substantial variation in the durations of poverty spells and welfare receipt. For example, of all households with incomes below the poverty line in any given month, many more are in the midst of a short rather than a long poverty spell. A short poverty spell observed in survey data may indicate short-run need or crisis, but it also may indicate a problem with the survey's data or measures, such as a misunderstood question, a reporting error, or inaccurate household composition. Alternatively, a short poverty spell may simply reflect a transition between jobs, a transition between school and work, or a change in marital status that makes the unit appear to have little or no income even though it may actually be receiving income from borrowing, support from persons outside the household, or personal savings. Therefore, the single-month accounting period used by the models may be capturing some short transition periods in which the unit, although apparently eligible, would not likely be defined as eligible by a caseworker asking about prospective income for the next month or so. It is important for FSP analysts to understand the relationship between single-month and multiple-month eligibility for and participation in the FSP for two principal reasons (1) it will improve our understanding of the current estimates of FSP participation rates and will suggest ways to improve future estimates of participation rates; and (2) it will improve the selection of the baseline FSP participants in FCS's microsimulation models. These improvements are discussed next.

A. IMPROVING THE ESTIMATES OF FSP PARTICIPATION RATES

Understanding the relationship between single-month and multiple-month eligibility for and participation in the FSP will allow us improve our understanding of the current estimates of FSP participation rates and will suggest ways to improve future estimates of participation rates. It is important

to estimate the FSP participation rate well, as it is one of the principal measures used by policymakers to assess how well the program is reaching its intended population.

Periodically, the FCS releases a report that presents estimates of the FSP participation rate (Trippe and Sykes, 1994; Stavrianos, 1997). In those reports, the FSP participation rate is defined as the ratio of the number of FSP participants in a given month to the number of eligibles. The number of FSP participants—the numerator of the participation rate—comes from FSP program operations data, which is a monthly census of FSP participation and benefit issuance that provides the most accurate measure of aggregate FSP participation available. The number of FSP eligibles—the denominator of the participation rate—comes from the MATH* SIPP microsimulation model. Therefore, the participation rate is only as accurate as the estimated number of eligibles in the MATH* SIPP model. For instance, the participation rate will be *underestimated* to the extent that the number of eligibles in the MATH* SIPP baseline includes those that are apparently eligible in the simulation month but who would not likely be defined as eligible by a caseworker asking about prospective income for the next few months. Similarly, the participation rate will be *overestimated* to the extent that the number of eligibles in the MATH* SIPP baseline does not include those that report receipt of food stamps but appear to be ineligible because of SIPP survey errors or because the survey pertains to a time period that is slightly different from the time period covered by questions asked by the FSP caseworker.\(^1\)

B. IMPROVING THE SELECTION OF BASELINE FSP PARTICIPANTS

Understanding the relationship between single-month and multiple-month eligibility for and participation in the FSP would also help us to select the households to participate in the FSP under current law in the MATH[©] SIPP microsimulation model (henceforth, these households will be referred to as the baseline households). A brief description of the microsimulation process and how and why baseline

¹These so-called ineligible reporters make up about 10 percent of the households in the SIPP that report food stamps and will be specifically examined in this study.

participant households are selected will help to clarify why additional information about apparent FSP eligibility is important for accurate microsimulation estimates of reforms to the FSP.

The impact of reforms to the FSP is estimated using the MATH[®] SIPP microsimulation model by comparing the baseline FSP caseload with the FSP caseload after a reform is implemented. Therefore, the validity of the estimate relies in part on the selection of an FSP baseline that resembles the true FSP population along a number of key dimensions. The baseline can be selected in a number of ways. Since the SIPP identifies households that receive food stamps (henceforth referred to as "reporters"), the simplest method of selecting a baseline would be to include all food stamp reporters. Including only reporters, though, has a couple of problems.

This first problem with including only reporters in the baseline is that the number of reporters in the SIPP is about 22 percent lower than the number of FSP participants according to administrative data. A number of factors may contribute to this discrepancy: FSP households may fail to report receipt of food stamps, they may be disproportionately missed in the sample selection; they may disproportionately fail to respond to the survey; or they may disproportionately drop out of the SIPP after only a few interviews.

The second problem with including only reporters in the baseline is that the aggregate characteristics of food stamp reporters in the SIPP do not match the characteristics of the food stamp population as shown in administrative data, which are generally viewed as more reliable than survey data. In addition, some households that report receipt of food stamps have income and resources that suggest they are ineligible for food stamps, which is highly problematic for microsimulation modeling. Because of these problems, it is unwise to measure the impact of reforms to the FSP relative to a baseline consisting solely of food stamp reporters in the SIPP.

Another method of selecting households for the MATH[®] SIPP baseline would be to include all households that the model deems to be eligible for the FSP. The problem with this method, though, is that not all persons eligible for the FSP actually participate in the FSP. Therefore, the baseline FSP participants

are selected using a method whereby only a portion of those households eligible for the FSP are included in the baseline. The first households included in the baseline are all *eligible* food stamp reporters ² Given that the number of eligible reporters is about 31 percent lower than the number of participants according to FSP administrative data, a substantial proportion of the baseline participants in the model have to be nonreporters to ensure that the total number of simulated participants matches administrative data. Nonreporters are selected to participate so that the resulting baseline looks like the food stamp population observed in administrative data in terms of both size and key characteristics. The process of selecting households to participate so that the baseline looks like the true food stamp population is referred to as calibrating the model. This study, by examining FSP eligibility and participation on the basis of both single-month and multiple-month household data in the SIPP, will help us to tailor the calibration process to select a more accurate MATH⁴ SIPP baseline. The findings of this study may also be relevant to selecting the baseline for FCS's MATH⁴ CPS microsimulation model--a microsimulation model that is based on single-month data from the Current Population Survey.

C. RESEARCH OBJECTIVES

The basic objective of this report is to draw upon the research and data on the dynamics of poverty, eligibility, and participation to develop more accurate estimates of FSP eligibility and participation. While there are many interesting and potentially fruitful research questions that could be pursued, we address the following four questions in this report:

- What proportion of the eligibles identified in a single month simulation have very short spells and other experiences associated with a transition rather than poverty?
- How can the modeling of participation be improved by better distinguishing between those
 eligibles who are likely to participate and those who may appear to be eligible but who are
 not likely to participate.

²Recall from above that about 10 percent of food stamp reporters in the SIPP are seemingly ineligible for the FSP.

- Is the use of single-month data to estimate eligibility the best approach? Would some short-term smoothing of the income used in eligibility simulations improve the consistency between reported participation and simulated eligibility?
- To what extent do estimates of eligibility vary according to the month that is chosen as the basis of the cross-section estimate?

D. ORGANIZATION OF THIS REPORT

In Chapter II we review the literature on poverty spells. In Chapter III, we describe the data we use for the analyses in this report. We describe the SIPP data, including the longitudinal file and the wave and core files, we describe the MATH[®] SIPP microsimulation model and its SIPP-based input database (which we refer to as the MATH[®] SIPP database); and we describe the multiple-month analysis file, which is created from extracts of the MATH[®] SIPP database and the SIPP longitudinal file. Finally, in Chapter IV, we present our analyses and findings on single-month and multiple-month eligibility for and participation in the FSP, and we discuss the implications our findings have for simulating FSP participation in FCS's MATH[®] SIPP microsimulation model.

II. LITERATURE REVIEW

Although a substantial amount of research has been done on poverty spells, little has been done in a microsimulation modeling context. Instead, most of the research on poverty spells focuses on their incidence, length, and causes. The unit of analysis for these studies typically is a set of households who either enter or exit poverty during a given time period. This report, in contrast, focuses on the before and after circumstances of a cross-section of households, where the unit of analysis is a set of households who are eligible for or participate in the FSP in a particular month. Despite the differences between the focus of this report and the focus of most of the research on poverty spells, an examination of the research on poverty spells will provide perspective as to the amount of variation we should expect to see in poverty levels and FSP program participation in a single month versus multiple months.

Bane and Ellwood (1983) use the Panel Study of Income Dynamics data to examine how long women with children tend to stay on Aid to Families with Dependent Children (AFDC) and to examine the characteristics of those who receive welfare income for relatively long periods of time. Bane and Ellwood find that although most of the women who go on AFDC have short spells, the bulk of the person-years of AFDC receipt are accounted for by women who have spells of eight years or more. They also find that about a third of the women who end a spell of AFDC receipt return for another spell, and that three-fourths of all spells of AFDC begin with a relationship change whereby a female-headed family with children is created.

Ruggles and Williams (1987) use 1984 SIPP data to examine transitions into and out of poverty. They measure the association between entering or leaving poverty and the following family life events: a birth, a death, a marriage, a separation or divorce, the loss of employment, or the start of employment. Ruggles and Williams calculate the likelihood of entering or leaving poverty if one is in a family where such an event occurs. They find significant correlations between the occurrence of the life events examined and

transitions into and out of poverty. Overall, about half of the transitions occurred in the same month as one of the six events examined. Ruggles and Williams also show that there is a large amount of within-year movement into and out of poverty. For example, they find that 5.9 percent of all families are in poverty for the entire year versus 26.2 percent of all families who are in poverty for at least one month of the year.

Blank and Ruggles (1993) examine AFDC and FSP eligibility and participation spells experienced by single women with children--the first investigation of FSP participation behavior within eligibility spells. Two key findings of Blank and Ruggles help inform this report. The first finding is that most spells of FSP eligibility are short and do not result in participation. For instance, although FSP participation occurs in 63 percent of all eligible months, only 24 percent of all spells result in FSP participation. Overall, 42 percent of the spells of eligibility end within two months. Given these findings, we should expect to see a substantial number of households in our analyses that are eligible for the FSP but are in the midst of a short spell of poverty and are not likely ever to participate in the FSP. The second finding of Blank and Ruggles that informs this report is that most spells of participation begin along with or shortly after the start of a spell of eligibility. For instance, 73 percent of all participation spells start in the same month as the eligibility spell, and almost all units who participate will have entered the program within six months of the start of an eligibility spell.

Gordon et al. (1997) examined the trends in income eligibility for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) and program participation in WIC and other nutrition and income assistance programs. They find that infants and children who are intermittently eligible for WIC in a given year but not eligible on the basis of their families' annual income are less likely to participate in WIC and other assistance programs that those who are eligible on the basis of their families' annual income. Specifically, Gordon et al. find the following in regards to income eligibility for WIC and program participation for infants and children in a given year:

- Among those eligible in all months, three-quarters report Medicaid and about half report WIC.
- Among those eligible on the basis of their families' annual income but not eligible in all months, about 30 percent report WIC and Medicaid.
- Among those eligible in some months but not on the basis of their families' annual income, about 10 percent report WIC and Medicaid.

These findings are consistent with the findings by Blank and Ruggles that the longer the spell of poverty for a family, the more likely it is that the family will participate in nutrition and income assistance programs.

The research objectives of Wemmerus and Porter (1996) and the methodology they use are quite similar to the objectives and methodology for this report. Wemmerus and Porter (1996) use data from the 1990 Survey of Income and Program Participation (SIPP) longitudinal file to examine households that report zero income in a particular month. They examine the financial attributes of these so-called zero-income households to see whether their month of zero income is an anomaly or whether these households are truly poor. Zero-income households have been of particular interest to FSP analysts because past research has found that the FSP participation rate for these households is unexpectedly lower than that of households with low but positive income (Trippe and Doyle 1992a and 1992b). Wemmerus and Porter find that while most households have a legitimate reason for reporting a period without income and some are truly impoverished, zero-income households are not at all a homogenous population, and few are truly prosperous) households for whom a report of zero income exaggerates their financial troubles. In short, Wemmerus and Porter find that single-month data from the SIPP often present a myopic picture of the true circumstances of zero-income households.

In the next chapter we describe the data and analysis files with which we examine the single- and multiple-month eligibility for and participation in the FSP.

III. DESCRIPTION OF DATA AND ANALYSIS FILES

The basic approach of the analyses for this report is to take a string of months from SIPP data and simulate FSP eligibility and participation in each of those months in comparison to a single base month. Even though this report informs the MATH[©] CPS as well as the MATH[©] SIPP microsimulation models, we use SIPP data for the analyses because they are the only data used by FCS's microsimulation models that contain month-to-month variations in income. We use the January 1992 MATH[©] SIPP microsimulation model to simulate FSP eligibility and participation in each of the analysis months of the SIPP longitudinal file. We modified the SIPP longitudinal file somewhat, though, because the MATH[©] SIPP model was designed to run on the MATH[©] SIPP database which is different in structure and content from the SIPP longitudinal file. The differences between the SIPP longitudinal file and the MATH[©] SIPP database will become clearer in the rest of this chapter where we describe, in turn, the SIPP data, the MATH[©] SIPP microsimulation model, and the multiple-month analysis file created for this report.

A. THE SURVEY OF INCOME AND PROGRAM PARTICIPATION (SIPP)

SIPP is a nationally representative longitudinal survey that provides detailed monthly information on household composition, family composition, income, labor force activity, and participation in government programs such as WIC, Medicaid, Aid to Families with Dependent Children (AFDC), and the Food Stamp Program (FSP). A new sample is selected for SIPP on a regular basis and interviewed repeatedly; each set of interviews based on the same original sample is referred to as a panel.

This report uses data drawn from the 1990 and 1991 panels of SIPP. The 1990 panel began in February of that year with a sample of approximately 21,900 households. The 1991 panel began the following February with a sample of about 14,300 households. Sample households within each panel are

¹Much of this description of the SIPP is drawn directly from Gordon et al. (1997).

divided into four subsamples of roughly equal size, referred to as *rotation groups*. One rotation group is interviewed each month. Each cycle through the four rotation groups using the same questionnaire is called a *wave*. The interview schedule results in each household in the sample being interviewed at 4-month intervals. There were eight waves in each of the SIPP panels discussed here, providing up to 32 months of income and program participation data for each sample person.

At each interview, information is collected about the prior 4 months. Thus, the 1990 SIPP panel covers the period from October 1989 through August 1992, and the 1991 SIPP panel covers the period from October 1990 through August 1993. Because these two panels both cover the period of interest for this report—September 1991 through May 1992—we combine data from the two panels for all the analyses in this report.

The U.S. Census Bureau attempts to interview all adults (persons age 15 or older) present at the time of the first interview. Persons under age 15 who are members of originally sampled households are also considered sample members, and relevant information is collected about them. During subsequent interviews, the original sample members and any persons living with them are considered part of the sample for that wave. Interviews are attempted with all adult sample members, and relevant information is collected about all sample members under age 15.

The Census Bureau creates files with data for each wave of interviews. During each wave, the sampled households are asked a set of core questions plus a set of questions on a topic that varies from month to month. The data from these interviews make up the wave core and wave topical module files, respectively. These files are made available to the research community after each wave is completed (the data are cleaned before release). Upon completion of the final wave of interviews in a given panel, the Bureau constructs a full-panel longitudinal research file. To construct these longitudinal files, the bureau

²Examples of topics are employment history, child care arrangements, financial assets, and taxes.

links the core data collected for each sample person for the entire panel. Each record in the longitude:

file contains the stream of data for a single person.

The SIPP longitudinal file, although constructed with the SIPP wave files, differs in some ways from the wave files. For example, the longitudinal file is created after each panel is finished and contains most of the data reported in a wave's core file but none of the data reported in a wave's topical module file. Also, the longitudinal file is person-based and is edited so that missing data for a person in a particular wave is imputed on the basis of that person's data in surrounding waves. In contrast, missing data in the core files for any given wave are imputed on the basis of similar households within that wave ³ As a result, imputed data on the core file in a given wave for a household may not be very similar to the data reported by that household in a previous or subsequent wave. This is one of the principal reasons that researchers will wait until the longitudinal file is prepared by the Census bureau for longitudinal research rather than analyzing data across wave files.

As in all longitudinal surveys, not all of the original sample members complete each interview. Failure to complete all the interviews is known as *attrition*, and is one potential source of bias in the findings presented in this report. For example, 25 percent of the 58,288 persons who completed interviews in the first wave of the 1990 SIPP panel were nonrespondents in at least one later month. If sample members who drop out of the sample are different from those who remain, analyses that do not account for these differences may yield biased results. The Census Bureau attempts to compensate for attrition by adjusting the sample weights provided with the files. In the analyses for this report, there is no attempt to adjust for attrition bias other than by using Census Bureau weights.

³The SIPP imputes data using a statistical matching technique know as the "hot deck" method.

Some of these persons may have died during the panel, which is less troublesome analytically than those that fail to complete interviews for other reasons. Also note that another 10,827 persons were not sample members during the first wave of the 1990 panel but were interviewed during at least one of the later waves of interviews when they became members of a SIPP household.

am bias" is another widely recognized problem in longitudinal data that may affect these analyses.

"P purports to contain monthly data, but research shows that transitions in status are more likely to occur on the "seam" between interviews (for example, between the fourth month of one wave and the first month of the following wave). For example, Klerman (1991) finds that transitions in health insurance coverage and employment are two to four times more likely to be reported at the seam than they would be if transitions were evenly distributed across the 4 months. The explanation is that individuals report current status as having been constant over the full reference period for the interview (in this case, 4 months), because of failure to recall changes or because of a desire to limit the duration of the interview. Nevertheless, because the analyses in this report are built around reference periods not determined relative to interview months, seam biases in the numbers reported by different individuals may cancel each other out. Furthermore, recall is still likely to be more accurate with SIPP's frequent interviews than in surveys with annual or longer recall periods, such as the Current Population Survey (CPS)

B. THE MATH[®] SIPP MICROSIMULATION MODEL

We use the January 1992 MATH[©] SIPP microsimulation model to simulate FSP eligibility and participation in each of the analysis months of the SIPP longitudinal file.⁵ The MATH[©] SIPP is one of FCS's microsimulation models that is used to measure the effect on the FSP of reforms to the FSP and other assistance programs that affect the FSP. The MATH[©] SIPP, as its name suggests, uses SIPP data as its input.

A microsimulation model is, essentially, an "electronic caseworker" that examines each household in a nationally representative input database and determines whether each household is eligible for the FSP and, if eligible, whether the household will participate in the FSP and the dollar amount of the benefit to

⁵We chose to do our analysis on the basis of the 1992 MATH[©] SIPP rather than the 1994 MATH[©] SIPP because the 1993 longitudinal file, from which wave 4 is used for the 1994 MATH[©] SIPP, is not yet available

which the household is entitled. The impact of a reform to the FSP is assessed by comparing the FSP caseload as a result of the reform with the "baseline" FSP caseload—that is, the caseload of FSP participants in the model's input database under current FSP rules.

The January 1992 MATH[®] SIPP model is designed to use data from wave 7 of the 1990 SIPP panel and wave 4 of the 1991 SIPP panel, which overlap in January 1992. Waves 4 and 7 contain topical modules whose questions relate to household living expenses and asset holdings, both of which are necessary for determining FSP eligibility and benefits. For this report, though, we use the 1990 and 1991 SIPP longitudinal files as the input database for the MATH[®] SIPP model so that we can determine FSP eligibility and benefits in multiple months. To use these files in the MATH[®] SIPP model they must first be modified, as described below.

C. MULTIPLE-MONTH ANALYSIS FILE

The multiple-month analysis file created for this report comprises data from the four months before January 1992 (September, October, November, and December) and the four months after January 1992 (February, March, April, and May) of the combined 1990 and 1991 SIPP longitudinal files. We chose to examine four months on either side of January 1992 for two reasons. First, May 1992—the fourth month after January 1992—is the last month of the 1990 panel that contains data for all rotation groups (the first rotation group has its final interview in May 1992). And second, examining data four months before and after January 1992 is the minimum number of months necessary to ensure that we get data from across waves before and after January 1992 for all rotation groups. Having data that crosses a wave is important for our analyses so the we can account for the seam effect in SIPP. Recall that the seam effect refers to the phenomenon that changes in household circumstances tend to occur between two waves rather than in the 4 months within a wave.

There are 33,731 households in the combined January 1992 longitudinal file: 20,350 from the 1990 panel and 13,381 from the 1991 panel (Table III.1). When weighted, this translates into 96 million

TABLE III.1
WEIGHTED AND UNWEIGHTED SAMPLE SIZES IN JANUARY 1992

	Unweighted	Weighted
Households		
1990 Panel	20,350	95,494,161
1991 Panel	13,381	95,858,470
Combined Panels	33,731	95,635,149
Persons in Combined Panels	89,467	247,000,089

SOURCE: 1990 and 1991 Panels of the SIPP Longitudinal File.

households and 247 million persons. Most of these households contain only primary families (65 percent) or primary individuals living alone (26 percent); the remaining 9 percent are a mixture of multiple families and unrelated individuals (Table III.2).

Our units of analysis for this study are all potentially eligible food stamp units⁶ that meet the following two criteria: (1) the unit resides in a household that contains at least one person who is present for all 9 months of the analysis period, and (2) the unit has at least one person in common from month to month. These criteria ensure that we do not compare the characteristics of a food stamp unit in two different months who have no members in common. Despite these criteria, though, our analyses may end up comparing potentially eligible FSP units whose composition from month to month is quite different. Still, only a few potentially eligible FSP units have compositions that change substantially from month to month. Using the above criteria to define potentially eligible FSP units to examine for this study yields 31,759 unweighted potentially eligible FSP units in 31,682 unweighted households. When weighted, this translates into 91 million potentially eligible FSP units in 90 million households (Table III.3).

Because household composition may change from month to month, the composition of the potentially eligible FSP units in those households may change as well. We define the composition of the potentially eligible food stamp units in one of two ways, depending on whether the household's composition in any of the analysis months changed from January 1992. For households whose composition in the analysis month is the same as in January 1992, we include in the food stamp unit the same persons who were in the unit in January 1992. Defining the food stamp unit in this way ensures that the unit's composition does

⁶A potentially eligible food stamp unit is the group of persons in a household who would be required to file together under FSP regulations were they to apply for food stamps. All households in the SIPP data, excluding group quarters, contain at least one potentially eligible food stamp unit.

TABLE III.2

DISTRIBUTION OF HOUSEHOLDS BY FAMILY TYPE IN JANUARY 1992

	Number	Percent
Primary Family Only	62,471,715	65.3
Primary Family with Related Family	2,516,810	2.6
Primary Family with Unrelated Family	168,092	0.2
Primary Family with Unrelated Individual	1,679,311	1.8
Primary Individual Only	24,502,643	25.6
Primary Individual with Unrelated Family	428,732	0.4
Primary Individual with Unrelated Individual	3,518,942	3.7
Secondary Individual Only	348,904	0.4
Total	95,635,149	100.0

SOURCE: 1990 and 1991 Panels of the SIPP Longitudinal File.

TABLE III.3

NUMBER OF POTENTIALLY ELIGIBLE FOOD STAMP UNITS IN JANUARY 1992

	Unweighted	Weighted
Total Households in SIPP	33,731	99,635,149
Households Analyzed	31,682	90,495,329
FSP Units Analyzed	31,759	90,692,986

SOURCE: 1990 and 1991 Panels of the SIPP Longitudinal File.

not change from month to month as long as household composition is constant.⁷

For household's whose composition in any of the analysis months is different from January 1992, we redefine the food stamp unit according to the January 1992 MATH[©] SIPP unit definition rules. Those unit definition rules are as follows:

- If the household receives food stamps, persons reporting receipt of food stamps are included in the food stamp unit.
- If the household does not receive food stamps but receives AFDC, SSI, General Assistance, or Veterans Benefits, then the household's head, the spouse, and the children of persons reporting receipt of the assistance, as well as anyone else reporting receipt of the assistance are included in the food stamp unit.
- If the household does not receive food stamps or any type of public assistance, all persons in the household are included in the food stamp unit.
- SSI cashout persons and postsecondary students meeting certain criteria are excluded from the food stamp unit.

The multiple-month file contains income and demographic information from the longitudinal file. Because expenses and assets data for households are reported in topical module files and not in the longitudinal file, these data are appended to the multiple-month file from the current 1992 MATH® SIPP file. As a result, expenses and assets data do not vary from month to month in our analyses. Therefore, multiple-month changes in food stamp eligibility and benefits are caused only by changes in household composition and household income.

The SIPP longitudinal file does not contain the data necessary to define disability status in the same way as the MATH[®] SIPP file (the MATH[®] SIPP file draws on disability data from the wave 1 topical module). Therefore, for the multiple-month file we assume that the disability status of a person in any given month is the same as it was in January 1992. If a person was not present in January 1992, we define

⁷According to the 1992 MATH[©] SIPP food stamp unit definition algorithm, a change in a household's public assistance status could change the FSP unit composition even though the household's composition did not change

as disabled those person under age 65 who report that they have a physical, mental, or other health condition that limits the kind or amount of work that person can do (DISAB=1).

For the sake of simplicity, we assume that the full-time postsecondary student status of a person in any given month is the same as it was in January 1992. If a person was not present in January 1992, we assume that person is not a full-time postsecondary student.

IV. ANALYSES AND FINDINGS

In this chapter, we present our analyses and findings on the four research questions of this report:

- (1) What proportion of the eligibles identified in a single month simulation have very short spells and other experiences associated with a transition rather than poverty?
- (2) How can the modeling of participation be improved by better distinguishing between those eligibles who are *likely to participate* and those who may appear to be eligible but who are *not likely to participate*.
- (3) Is the use of single-month data to estimate eligibility the best approach? Would some short-term smoothing of the income used in eligibility simulations improve the consistency between reported participation and simulated eligibility?
- (4) To what extent do estimates of eligibility vary according to the month that is chosen as the basis of the cross-section estimate?

We address questions one and two in detail in the first section of this report, where we examine the singleand multiple-month eligibility for and participation in the FSP and its implications for simulating FSP eligibility. We then briefly address questions three and four. Finally, we present our conclusions.

A. SINGLE- AND MULTIPLE-MONTH ELIGIBILITY FOR THE FSP AND ITS IMPLICATIONS FOR SIMULATING FSP PARTICIPATION

In this section, we address two of the four research questions of this report:

(1) What proportion of the eligibles identified in a single month simulation have very short spells and other experiences associated with a transition rather than poverty?

and

(2) How can the modeling of participation be improved by better distinguishing between those eligibles who are *likely to participate* and those who may appear to be eligible but who are *not likely to participate*.

We address the first question by analyzing FSP eligibility and participation in January 1992 and during the months before and after January 1992 using the multiple-month analysis file developed for this report.

We analyze eligibility and participation for the following groups of potentially eligible FSP units: all

eligibles in January 1992, eligibles who report receipt of food stamps in January 1992 (eligible reporters); eligibles who do not report receipt of food stamps in January 1992 (eligible nonreporters); and those that report receipt of food stamps in January 1992 but are seemingly ineligible (ineligible reporters).

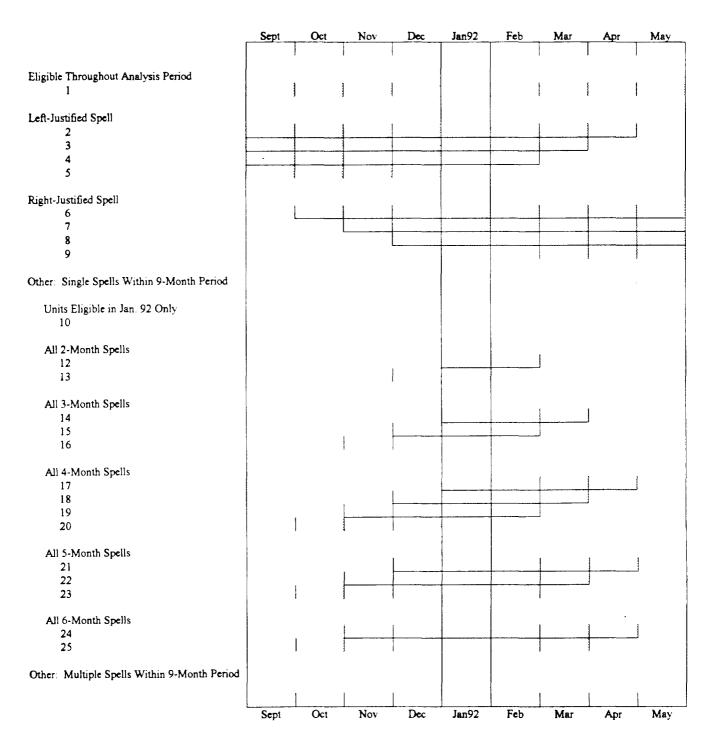
We address the second question--how the modeling of participation can be improved by better distinguishing between those eligibles who are likely and not likely to participate--by analyzing the longitudinal FSP eligibility and participation characteristics of the eligible nonreporters and the ineligible reporters, the two groups whose characteristics have the greatest implications for changing the current method of simulating participation in FCS's microsimulation models. Currently, underreporting of FSP participation in the SIPP is corrected in FCS's MATH[©] SIPP microsimulation models by selecting a portion of the eligible nonreporters to participate in the baseline FSP simulation. We assess whether we can identify the eligible nonreporters that, in fact, receive food stamps and whether selecting these persons to participate in the baseline improves the model. Similarly, we assess whether we can identify the ineligible reporters that, in fact, are eligible and whether selecting these persons to participate in the baseline improves the model.

Analyzing FSP eligibility spells using longitudinal data can be difficult to conceptualize. Therefore, in Figure IV.1, we show graphically all the various types of FSP eligibility spells that we can examine using the multiple-month analysis file. The shaded regions represent the following types of spells of eligibility during the 9-month analysis period: eligible throughout (row 1); left- and right-justified eligibility spells, all of which are at least 5 months long (rows 2 through 9); various single spells of eligibility (rows 10 through 25); and multiple spells of eligibility for which we do not illustrate the possible scenarios (row 25). In the analyses presented below, we often aggregate some of the rows in Figure IV.1 to make them easier to analyze.

¹In Appendix A, we present the disaggregated eligibility and participation data for all eligibles, eligible reporters, eligible nonreporters, and ineligible reporters.

FIGURE IV.1

GRAPHICAL REPRESENTATION OF ALL POSSIBLE ELIGIBILITY SPELLS DURING 9-MONTH ANALYSIS PERIOD



1. All Eligibles

Of the 91 million potentially eligible FSP units present in the multiple-month analysis file, 14 percent (13 million) are eligible for the FSP in January 1992.² Among the eligibles, 47 percent report receipt of food stamps (so-called eligible reporters) in January 1992 (Table IV.1). Note that among the ineligibles in January 1992, one percent (677 thousand) also report receipt of food stamps; these so-called ineligible reporters will be discussed later in this chapter. Among all eligibles in January 1992, 76 percent are eligible throughout the 9-month analysis period, 10 percent have either a left- or right-justified eligibility spell, 5 percent have a single eligibility spell of 1 to 6 months long, and 8 percent have multiple eligibility spells (Table IV.2).

2. Eligible Reporters

Eligibles that report receipt of food stamps in January 1992 are much more likely to be eligible throughout the analysis period than those that do not (90 versus 64 percent, respectively). This suggests that long-term eligibles are more likely than short-term eligibles to participate in the FSP. In fact, 55 percent of units eligible throughout the analysis period report food stamps in January 1992, versus 25 percent of units with left- or right-justified eligibility spells, 11 percent of units with a single eligibility spell of 1 to 6 months long, and 20 percent of units with multiple eligibility spells (Table IV.3). A long spell of eligibility, though, does not necessarily imply that a household will participate in the FSP, for of those eligible throughout the analysis period, 45 percent do not report receipt of food stamps in January 1992. These so-called eligible nonreporters will be analyzed in the next section of this report, during which

²The number of eligible FSP units in the January 1992 MATH SIPP database is about 14 million versus 13 million for the multiple-month analysis file in January 1992. The difference is due to the 10 percent of the potentially eligible FSP units in the January 1992 MATH SIPP that did not meet the requirements outlined in chapter III for inclusion in our multiple-month file. Although our analyses will be biased to the extent that the excluded units systematically differ from all units, we do not suspect this is a significant problem given that the percentage of eligible units in the 1992 MATH SIPP is 14.7 percent versus 14.3 percent for the multiple-month analysis file.

TABLE IV.1

DISTRIBUTION OF ALL POTENTIALLY ELIGIBLE FSP UNITS
IN JANUARY 1992 BY FSP ELIGIBILITY STATUS

	Number	Pct. of	Pct. of
	(000s)	Subtotal	Total
Total	90,693		100.0
FSP Eligible			
Reporter in Jan. 92	6,079	46.9	6.7
Non-Reporter in Jan. 92	6,872	53 .1	7.6
Subtotal	12,951	100.0	14.3
FSP Ineligible			
Reporter in Jan. 92	677	0.9	0.7
Non-Reporter in Jan. 92	77,066	9 9.1	85.0
Subtotal	77,742	100.0	85.7

SOURCE: January 1992 MATH SIPP multiple-month analysis file.

TABLE IV.2

DISTRIBUTION OF FSP ELIGIBLES IN JANUARY 1992
BY LENGTH OF ELIGIBILITY SPELL

	Number	Percent
	(000s)	
All Eligibles		
Eligible Throughout	9,875	76.2
Left- or Right- Justified Spells	1,350	10.4
1-6 Month Spells	655	5.1
Other: Multiple Spells	1,072	8.3
Total	12,951	100.0
Eligible Reporters		
Eligible Throughout	5,456	8 9.8
Left- or Right- Justified Spells	330	5.4
1-6 Month Spells	74	1.2
Other: Multiple Spells	218	3.6
Total	6,079	100.0
Eligible Non-Reporters		
Eligible Throughout	4,418	64.3
Left- or Right- Justified Spells	1,019	14.8
1-6 Month Spells	58 0	8.4
Other: Multiple Spells	854	12.4
Total	6,872	100.0

SOURCE: January 1992 MATH SIPP multiple-month analysis file.

TABLE IV.3

DISTRIBUTION OF ELIGIBLES IN JANUARY 1992
BY LENGTH OF ELIGIBILITY SPELL AND FSP REPORTING STATUS

	Number	Percent
	(000s)	
Eligible Throughout		
Reporters	5,456	55.3
Non-Reporters	4,418	44.7
Total	9,875	100.0
Left and Right Justified Spells		
Reporters	330	24.5
Non-Reporters	1,019	75.5
Total	1,349	100.0
1-6 Month Spells		
Reporters	74	11.3
Non-Reporters	580	88.7
Total	654	100.0
Other: Multiple Spells		
Reporters	218	20.3
Non-Reporters	854	79.7
Total	1,072	100.0

we also discuss whether the modeling of participation can be improved by better distinguishing between those eligible nonreporters who are likely to participate and those who are not.

3. Eligible Nonreporters

Eligible nonreporters are often simulated to participate in the FSP under baseline rules in FCS's microsimulation models to correct for the underreporting of food stamp participation in the national survey databases that are used as the input to these models.³ In this section, we describe the longitudinal FSP eligibility and participation characteristics of eligible nonreporters in the hopes that it will help us to determine which eligible nonreporters actually receive food stamps and whether it is advantageous to include as participants in the baseline those that actually receive food stamps.

A comparison of the nonreporter units eligible for five or more months with those eligible for less than five months shows that long-term eligible units are more likely to have fixed incomes and the characteristics associated with units that have fixed incomes. For instance, the long-term eligible units, in comparison with the short-term eligible units, are more likely to have elderly or disabled members (57 versus 22 percent) and the fixed income sources typically associated with the elderly or disabled--Social Security (46 versus 16 percent) and Supplemental Security Income (SSI) (13 versus 4 percent). In contrast, the short-term eligible units are much more likely to have earnings (70 versus 31 percent) and unemployment compensation (9 versus 5 percent)--income sources typically associated with working-age, non-disabled adults (Table IV.5).

The distribution of income as a percentage of poverty for long-term eligible nonreporter units is very similar to that of short-term eligible nonreporter units. Roughly 20 percent of the units in both groups have

In the January 1992 MATH[©] SIPP database, for instance, the percentage of *all* FSP units reporting receipt of food stamps is underreported by 22 percent, and the percentage of *eligible* FSP units reporting receipt of food stamps is underreported by 31 percent (Table IV.4). Although underreporting of food stamp receipt by SIPP respondents is cited most often as the reason for too few FSP units in the SIPP, other contributing factors include survey attrition and nonresponse among FSP recipients, as well as undercoverage of FSP units in the SIPP sampling frame.

TABLE IV.4

REPORTED FOOD STAMP PARTICIPANTS IN THE JANUARY 1992 MATH SIPP DATABASE COMPARED WITH ADMINISTRATIVE DATA

Participating Units (Administrative Data)	9,631,195
All Reporting Units (MATH SIPP Jan. 92) Underreporting Percentage	7,485,424 22.3
Eligible Reporting Units (MATH SIPP Jan. 92) Underreporting Percentage	6,636,281

SOURCE: FSP Programs Operations Data, 1992, 1990 and 1991 SIPP panels.

TABLE IV.5

CHARCTERISTICS OF ELIGIBLE NONREPORTERS IN JANUARY 1992

	Long-Term E (5+ Mon	•	Short-Term 1 (<5 Mor	_	
~	Number		Number		
	(000s)	Percent	(000s)	Percent	
ligible Nonreporters in Jan. 92					
All	6,195	100.0	676	100,0	
Ever Reports Food Stamps	523	8.4	36	5.3	
With Children	1,886	30.4	287	42.5	
With Elderly or Disabled	3,510	56.7	150	22.2	
With Earnings	1,901	30.7	473	70.0	
With AFDC or GA	245	4.0	16	2.4	
With SSI	818	13.2	2 9	4.3	
With Social Security	2,876	46.4	106	15.7	
With Unemployment Compensation	298	4.8	62	9.2	
Income as a Percentage of Poverty					
No Income	479	7.7	66	9.8	
>0 to 50%	643	10.4	70	10.4	
51-100%	2,660	42.9	168	24.9	
101-130%	1,807	29.2	302	44.7	
>130%	605	9.8	71	10.5	

incomes below 50 percent of poverty; and roughly 10 percent of the units in both groups have incomes above 130 percent of poverty. The only difference between the two groups is that the long-term eligible nonreporter units have a higher percentage units with incomes between 51 and 100 percent of poverty (43 versus 25 percent) and, correspondingly, a somewhat lower percentage of units with incomes between 101 and 130 percent of poverty (29 versus 45 percent) (Table IV.5).

Despite some differences in the characteristics of the short-term eligible nonreporters and the long-term eligible nonreporters, both groups show a fairly low incidence of reporting receipt of food stamps in the months around January 1992. During the 9-month analysis period, 8 percent of the long-term eligibles ever report receipt of food stamps versus 5 percent of the short-term eligibles (Table IV.5). But, the likelihood of ever receiving food stamps is not uniform among all eligible nonreporters.

Among all eligible nonreporters, those most likely ever to report food stamps have either public assistance income or unemployment compensation: 20 percent of the units with AFDC or General Assistance income, 12 percent of the units with SSI, and 14 percent of the units with unemployment compensation (Table IV.6) ever report receipt of food stamps. In contrast, only 3 percent of the units with Social Security income ever report receipt of food stamps. In accordance with these findings, units with children are more likely than units with elderly or disabled ever to report receipt of food stamps.

The eligible nonreporter units with lower incomes are only somewhat more likely than those with higher incomes ever to report receipt of food stamps: 10 percent of the units with no income and 15 percent of the units with incomes between 0 and 50 percent of poverty ever report receipt of food stamps, versus 8 percent of the units with incomes between 51 and 100 percent of poverty, 7 percent of the units with incomes between 101 and 130 percent of poverty, and 2 percent of the units with incomes above 130 percent of poverty.

Do these findings enable us to distinguish better between those eligible nonreporters who are likely to participate in the FSP and those who are not? In other words, are the eligibility and participation

TABLE IV.6

CHARACTERISTICS OF ELIGIBLE NONREPORTERS IN JANUARY 1992
WHO EVER REPORT FOOD STAMPS DURING 9-MONTH ANALYSIS PERIOD

		Ever Reports Fo	od Stamps	
		Number	Percent	
	All Units	(000s)		
Eligible Nonreporters in Jan. 92				
All	6,872	559	8.1	
With Children	2,173	355	16.3	
With Elderly or Disabled	3,660	190	5.2	
With Earnings	2,374	255	10.7	
With AFDC or GA	261	52	19.9	
With SSI	847	102	12.0	
With Social Security	2,982	102	3.4	
With Unemployment Compensation	360	53	14.7	
Income as a Percentage of Poverty				
No Income	545	55	10.1	
>0 to 50%	713	110	15.4	
51-100%	2,828	224	7.9	
101-130%	2,109	155	7.3	
>130%	676	16	2.4	

dynamics of eligible nonreporter units in the months around the simulation month indicative of whether eligible nonreporters do, in fact, receive food stamps in the simulation month? Unfortunately, unless we already know something about the characteristics of eligible nonreporters that actually receive food stamps, it is *impossible* to predict which eligible nonreporters in the SIPP are likely to receive food stamps. Therefore, the eligibility and participation dynamics of eligible nonreporters tell us nothing about their likelihood of receiving food stamps in the simulation month. For instance, even though we know that eligible units with long spells of eligibility are the most likely to report receipt of food stamps (Table IV.3), this does not mean, in turn, that eligible nonreporter units with long spells of eligibility are more likely than those with short spells of eligibility actually to receive food stamps. In terms of modeling participation among eligible nonreporters to create an accurate baseline FSP population, though, it may not be necessary to distinguish between those eligibles who are likely to participate and those who are not. The reason for this is explained next.

There are two principal methods by which to select eligible nonreporter units for the FSP baseline:

- (1) select those units believed to receive food stamps but do not report doing so in the SIPP; and
- (2) select those units that produce a final baseline FSP population that matches administrative data along a number of key dimensions.

It is important to understand that these two methods are not independent of one another as long as the shortfall of reported FSP participants in the SIPP is due only to the underreporting of food stamps among SIPP respondents. If the shortfall is due only to underreporting of food stamps then selecting nonreporters that are likely to receive food stamps (method 1) should produce a final baseline FSP population that matches administrative data along key characteristics; and, conversely, selecting nonreporters to produce a final baseline FSP population that matches administrative data along key

characteristics should end up selecting those units that are likely to receive food stamps. But, the above two methods will be independent of one another and will not necessarily produce the same FSP baseline if the shortfall of FSP participants is due to reasons other than underreporting.

To decide which method should be used to select eligible nonreporters for the FSP baseline in the MATH[®] SIPP model, it is important to understand the following point:

If the shortfall of reported FSP participants in the SIPP is due only to the underreporting of food stamps among respondents, then *it does not matter* which method is used to select baseline participants. Either one will select primarily actual FSP recipients and will produce an accurate baseline.

But, if the shortfall of reported FSP participants in the SIPP is not due only to the underreporting of food stamps among SIPP respondents, then method 1 will select primarily actual FSP recipients but will not result in an accurate baseline and method 2 will result in an accurate baseline but will not necessarily select actual FSP recipients. Whether to use method 1 or method 2 depends on whether it is more important to have actual FSP recipients in the baseline or more important to have an accurate baseline in terms of its similarity to administrative data.

We believe that method 2 should be used to select eligible nonreporters to participate in the baseline because an accurate reform simulation is most dependent on an accurate baseline. Therefore, even if it were possible to distinguish between those nonreporters who are likely to participate and those who are not, it would not be necessary to do so. In the next section, we assess whether the FSP baseline would be improved by including the ineligible reporters—that is, the SIPP respondents that report receipt of food stamp but are seemingly ineligible.

⁴The likelihood of selecting actual participants for the baseline is correlated with the number of key characteristics along which the baseline administrative data are matched.

⁵The baseline will have too few participant and it also may not match administrative data in terms of distribution of units by key characteristics.

4. Ineligible Reporters

Ineligible reporters are those units that report receipt of food stamps but are seemingly ineligible. It may be useful to include ineligible reporters in the FSP baseline as long as they are actually eligible for the FSP--that is, not receiving benefits in error. We know from QC administrative data that 3 percent of all FSP units in 1992 were ineligible and received food stamps in error. Therefore, if we assume that 3 percent of the 6.8 million units that report food stamps in the SIPP are ineligible, then about 200 thousand of the 677 thousand ineligible reporters in SIPP in January 1992 are probably ineligible, which leaves 477 thousand ineligible reporters that may, in fact, be eligible (Table IV.1). We describe the longitudinal characteristics of ineligible reporters next to determine whether they may be eligible in January 1992 even though they appear ineligible.

Of all ineligible reporters, 47 percent report receipt of food stamps throughout the 9-month analysis period, 28 percent have left- or right-justified spells of reporting, 20 percent have a single 1 to 6 month spell of reporting, and 5 percent have multiple spells of reporting during the 9-month analysis period (Table IV.7). The distribution of ineligible reporters by reason of ineligibility in January 1992 is as follows: 29 percent fail the asset test only, 26 percent fail both the gross and net income tests, 21 percent fail the asset test and either the gross or net income tests, 17 percent fail the net income test only, and 8 percent fail the gross income test only (Table IV.8).

It may be useful to include ineligible reporters in the FSP baseline to the extent that they actually are eligible for the FSP and their apparent ineligibility in January 1992 is an anomaly, perhaps caused by errant SIPP data or by a brief spell of ineligibility that does not actually result in an exit from the FSP. To assess the likelihood that ineligible reporters actually are eligible, we examine their eligibility in the months around

TABLE IV.7

DISTRIBUTION OF INELIGIBLE REPORTERS IN JANUARY 1992
BY LENGTH OF FSP REPORTING SPELL

	Number (000s)	Percent
Ineligible Reporters		
Reporter Throughout	321	47.4
Left and Right Justified Spells of Reporting	190	28.1
1-6 Month Spells of Reporting	132	19.5
Other: Multiple Spells of Reporting	35	5.2
Total	677	100.0

TABLE IV.8

DISTRIBUTION OF INELIGIBLE REPORTERS IN JANUARY 1992
BY REASON FOR INELIGIBILITY

	Number	Percent
	Number (000s) 54 114 196 140 173 677	
Ineligible Reporters		
Fail Gross Income Test Only	54	8 .0
Fail Net Income Test Only	114	16.8
Fail Asset Test Only	196	29.0
Fail Asset and Gross or Net Income Tests	140	20.7
Fail Gross and Net Income Tests	173	25.6
Total	677	100.0

January 1992 For simplicity, we only present our findings for the ineligible reporters that report receipt of food stamps throughout the 9-month analysis period (47 percent of all ineligible reporters).

The proportion of ineligible reporters in January 1992 who report receipt of food stamps throughout the 9-month analysis period that are eligible for the FSP increases steadily as you move away from January 1992 in either direction (Table IV.9). In December, 19 percent of the eligible nonreporters in January are eligible, and in February, 15 percent are eligible. These proportions rise to 31 percent and 21 percent for the months of September and May, respectively.

Recall from the description in Chapter III of the multiple-month file created for this report that the assets data for households are appended to the multiple-month file from the current 1992 MATH[©] SIPP file. As a result, assets amounts do not vary from month to month in these analyses and cannot account for changes in FSP eligibility. Presented in Table IV.10 is the distribution of ineligible reporters in January 1992 that report food stamps throughout the 9-month analysis period by reason for being ineligible in January 1992. Excluding the 50 percent who are asset ineligible throughout the 9-month period, roughly 50 to 60 percent of the remaining ineligible reporters are eligible within four months of January 1992.

These findings suggest that a substantial portion of ineligible reporters, perhaps up to 30 percent, may be income eligible in the months around the simulation month and thus could be included in the baseline set of participants. To make these units appear eligible in January 1992, we would have to use their income data from one of the months around January 1992 in which they are eligible. But, using income data from the months around the simulation month makes creating the MATH[©] SIPP database more complex, particularly if the household composition changes in the months around January 1992. Moreover, 30 percent of the ineligible reporters, which is probably the upper limit of the percentage of

⁶Our findings were similar for other groups of ineligible reporters (see Appendix A).

The SIPP wave files, from which the MATH® SIPP database are created, have up to 4 months of data around January 1992 for each unit.

TABLE IV.9

LONGITUDINAL ELIGIBILITY STATUS OF INELIGIBLE REPORTERS IN JANUARY 1992 WHO REPORT FSP RECEIPT THROUGHOUT THE 9-MONTH ANALYSIS PERIOD

	Percent
	Eligible
September	31.0
October	26.5
November	23.2
December	19.4
January	0.0
February	15.0
March	16.7
April	21.0
May	20.7
Total Ineligible Reporters That Repo	rt FSP Receipt
Throughout 9-Month Analysis Period	d = 321,000

TABLE IV.10

DISTRIBUTION OF INELIGIBLE REPORTERS IN JANUARY 1992 THAT REPORT RECEIPT OF FOOD STAMPS THROUGHOUT THE 9-MONTH ANALYSIS PERIOD BY REASON FOR INELIGIBILITY

Number (000s)	Percent
162	50.5
75	23.4
67	20.9
17	5.3
321	100.0
	(000s) 162 75 67 17

ineligible reporters that might actually be income eligible, still represents only about 200 thousand households, or less than 7 percent of the 3 million household difference between the number of FSP eligible reporters in SIPP and the number of FSP households according to administrative data. Therefore, the complexity added to the file creation process of including ineligible reporters in the baseline may not justify the small number of additional ineligible reporters that we could add to the baseline participants in the file.

5. Conclusions on Simulating Participation for Eligible Nonreporters and Ineligible Reporters

The way that FSP participants are selected for the MATH[®] SIPP baseline should not be changed given our findings on the eligibility and participation dynamics of eligible nonreporters and ineligible reporters.

In the case of eligible nonreporters, unless we first know something about the characteristics of eligible nonreporters that actually receive food stamps, it is impossible to predict which eligible nonreporters in the SIPP are likely to receive food stamps. Furthermore, even if we could predict which eligible nonreporters are likely to receive food stamps, for accurate simulations it would still be better to select participants that produce a baseline that matches key characteristics in administrative data. Although we could have come to the same conclusion without this study, this study is still valuable because it adds to the literature on the dynamics of poverty spells and participation in public assistance programs.

In the case of the ineligible reporters, even though it is possible to predict those that actually are eligible for the FSP by examining their eligibility in the months around the simulation month, the number of additional participants that would be added to the baseline would not justify the additional effort required to identify these participants.

The current method of selecting participants for the MATH[®] SIPP baseline is not perfect either. Stavrianos (1995) points out that although the current method corrects for the underreporting of food stamp receipt, it does not correct for underreporting of other characteristics, such as AFDC receipt. Moreover, because the current method selects eligible nonreporters so that the resulting baseline matches

administrative data for only two characteristics--unit size and gross income relative to poverty--it distorts the resulting baseline along other dimensions. For example, the current method selects too many low-income elderly households and too few high-income elderly households. Consequently, the average income of simulated FSP units with elderly in the baseline is too low relative to administrative data

Despite some problems with the current method of selecting participants for the MATH[®] SIPP baseline, the current method could be improved quite easily by selecting participants so that the resulting baseline matches administrative data for various characteristics in addition to unit size and gross income relative to poverty ⁸ In contrast, selecting eligible nonreporters on the basis of the likelihood of actually receiving food stamps, and selecting ineligible reporters on the basis of the likelihood of actually being eligible, would add complexity and may not even result in a baseline that is better than could be created by using the current method with some minor enhancements.

B. FSP ELIGIBILITY: THE EFFECT OF INCOME SMOOTHING

In this section, we examine whether short-term smoothing of the income used in eligibility simulations could improve the agreement between reported participation and simulated eligibility. In the previous section we discovered that about 36 percent of the eligible nonreporters in January 1992 are ineligible at some point in the 4 months before and after January 1992 (Table IV.2). Although some of these eligible nonreporters may be in need, those with the shortest spells of eligibility--1 to 2 months--are most likely in a brief transition or simply receive income on an irregular basis and thus appear poor in the simulation month when in fact they are not. In the previous section, we also discover that as many as 30 percent of the ineligible reporters in January 1992 may be eligible in the surrounding months. It is possible, therefore,

In fact, the January 1994 MATH® SIPP model selects participants using additional characteristics. Furthermore, the new unit definition and the new public assistance simulation module in the model is also likely to improve the FSP baseline.

that some of the ineligible reporters are actually eligible for the FSP and that their month of ineligibility is simply an anomaly.

To determine whether short-term smoothing of income could be beneficial, we compared FSP eligibility determined on the basis of average unit income for 3 months--December, January, and February. We calculated the 3-month average income only for those units whose composition and public assistance status was unchanged during the 3 months to ensure that changes in eligibility would be caused only by changes in income. As shown in Table IV.11, only about 3 percent of all households experience a change in unit composition or PA status in the month before or after January. A slightly higher percentage of eligible households, 6 percent, experience a change in the month before or after January.

We find that eligibility determinations based on income smoothing are virtually identical to those based on a single month of income. Among all households, 14.1 percent are eligible for the FSP using a 3-month income average versus 14.3 percent using a single month of income. The percentage of eligibles and ineligibles that report receipt of food stamps is also unaffected by income smoothing (46.9 and 0.9 percent, respectively) (Table IV.12).

C. FSP ELIGIBILITY: THE EFFECT OF VARYING THE SIMULATION MONTH

To determine the extent to which eligibility rates vary according to the month chosen as the simulation month, we calculated FSP eligibility rates for each month of the multiple-month file created for this report. As shown in Table IV.13, eligibility rates vary only slightly from month to month, and in no seemingly systematic manner. All the eligibility rates fall between 14.3 and 15.1 percent. Note, though, that changes in eligibility in the multiple-month file are due only to changes in income because assets are fixed at their January 1992 level.

TABLE IV.11

DISTRIBUTION OF HOUSEHOLDS IN JANUARY 1992 BY WHETHER THEIR FOOD STAMP UNIT COMPOSITION OR PURE PA STATUS CHANGED IN THE TWO MONTHS AROUND JANUARY 1992

(000s) 2,452 481 87,759	Percent
481	
481	
481	0.5
87 759	0.5
	96.8
90,693	100.0
352	2.7
411	3.2
12,187	94.1
12,951	100.0
2.100	2.7
70	0.1
75.572	97.2
77,742	100.0
	12,951 2,100 70 75,572

TABLE IV.12

DISTRIBUTION OF ALL POTENTIALLY ELIGIBLE FSP UNITS
IN JANUARY 1992 BY FSP ELIGIBILITY STATUS:
JANUARY 1992 VERSUS 3-MONTH AVERAGE

	Number	Pct. of	Pct. of
	(000s)	Subtotal	Total
Income = Jan. 92			
Total	90,693		100.0
FSP Eligible			
Reporter in Jan. 92	6,079	46.9	6.7
Non-Reporter in Jan. 92	6,872	53.1	7.6
Subtotal	12,951	100.0	14.3
FSP Ineligible			
Reporter in Jan. 92	677	0.9	0.7
Non-Reporter in Jan. 92	77,066	99.1	85 .0
Subtotal	77,742	100.0	85.7
Income = Avg (Dec. 91, Jan. 92	2, Feb. 92)		
Total	88,006		100.0
FSP Eligible			
Reporter in Jan. 92	5,811	46.9	6.6
Non-Reporter in Jan. 92	6,586	53.1	7.5
Subtotal	12,397	100.0	14.1
FSP Ineligible			
Reporter in Jan. 92	645	0.9	0.7
Non-Reporter in Jan. 92	74,963	99.1	85.2
Subtotal	75,608	100.0	85.9

TABLE IV.13

FOOD STAMP PROGRAM ELIGIBILITY RATES FOR VARIOUS MONTHS

Simulation Month	All Units (000s)	Pct. Eligible	Pct Eligible for \$0	Pct. Income Eligible but Asset Ineligible	Pct. Income Ineligible
September	91,755	14.9	0.1	5.8	79.2
October	91,425	14.5	0.1	5.5	7 9.9
November	91,184	14.5	0.1	5.5	79.9
December	90,963	15.1	0.1	5.6	79.2
January 1992	90,693	14.3	0.1	5.0	80.6
February	90,935	15.1	0.1	.5.5	79.3
March	91,140	15.1	0.1	5.7	79.2
April	91,429	14.6	0.1	5.7	79.6
May	91,751	14.8	0.1	6.1	79.0
mean	91,253	14.8	0.1	5.6	79.5
s.e.	367	0.3	0.0	0.3	0.5

D. CONCLUSIONS

In this report, we examined whether simulating FSP eligibility and participation on the basis of a single month of data from a household survey may present a myopic picture of a household's true circumstances and the factors underlying their participation decision, particularly for eligible nonreporters and ineligible reporters. It was theorized that we could use information on eligibility and participation in surrounding months to improve the selection of participants for the MATH^e SIPP baseline.

The research presented here suggests the following: (1) selecting eligible nonreporters based on the likelihood of actually receiving food stamps is not possible unless we know something about the characteristics of units that receive food stamps but fail to report receipt on SIPP, and (2) the benefits of selecting ineligible reporters based on the likelihood of actually being eligible do not outweigh the costs in terms of added complexity to the FSP baseline calibration process. Moreover, calibrating the model to select nonreporters based on the likelihood of actually receiving food stamps and to select ineligible reporters based on the likelihood of actually being eligible would probably result in a baseline that is less representative of the true FSP caseload than the baseline produced using the current calibration method.

We also examined whether income smoothing or varying the simulation month could improve the agreement between reported participation and simulated eligibility and found that neither did. In conclusion, we do not recommend changing the current method of selecting participants for the MATH® SIPP baseline beyond calibrating the model so that it matches better the characteristics of the FSP caseload according administrative data. This is currently done for the 1994 MATH® SIPP model.

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APPENDIX A

ELIGIBILITY AND PARTICIPATION SPELLS FOR ALL ELIGIBLES, ELIGIBLE REPORTERS, ELIGIBLE NONREPORTERS, AND INELIGIBLE REPORTERS

Universe: All Eligibles, Total

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Total		100.0		100.0			3,532				3,532		3,532			100.0	3,532	
Non-reporter			1,891		1,018		1,046	55.1			1,970		1,954	55.3	1,940	54.9	1,907	, -
eft just: Elig Sep to Apr	1,007	41.2	1 1,0-11	46.5	1,814	45.7	1,586	44.9	1,554	44.0	1,562	44.2	1,578	44.7	1,592	45.1	1,625	+8
Total	95	100.0	95	100.0	95	100.0	95	100.0	95	100.0		100.0	(; ! B5	100.0	95	100.0	1 95	100
Reporter	25		27		28		27	28.4		30.5	1 30i	31.6	29	30.5	29	30.5		
Non-reporter	70			71.6	67		68	71.6	66	89.5	85	68.4	66	69.5	86	89.5		
eft just: Elig Sep to Mar	1		i i		i		i		1		i i		i		i		i	
Total	61	100.0	61	100.0	61	100.0	61	100.0	61	100.0	61	100.0	61	100.0	61	100.0		-
Reporter	15	24.6	16	26.2	1 17	27.9	17	27.9	17	27.9	16	26.2	18	29.5	12	19.7	10	, 18
Non-reporter	46	75.4	45	73.8	44	72.1	44)	72.1	44	72.1	45	73.8	43	70.5	49	80.3	51	. 80
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Total			42			100.0		100.0	42	100.0			42			100.0	421	
Reporter			8	19.0	[6]		81	19.0		21.4		21.4	5 5	11.9	5	11.9	3	
Non-reporter	34	81.0	34	81.0	34	81.0	34	81.0	33	78.6	33	78.6	37	68.1	37	88.1	39	9:
eft just: Elig Sep to Jah					!	405 -	<u> </u>				ļ t		! !		1 1		1 1	1
Total			43			100.0		100.0		100.0	43	100.0			43		43	
Reporter	11		10	23.3	1 10:		10	23.3		20.9	8	18.6	8	18.6	8	18.6	8	
Non-reporter	3.2	74.4	33	76.7	33	78.7	33	76.7	34	79.1	35	81.4	35	81.4	35	81.4	35	. 8
ight just: Elig Oct to May Total	64	100.0	64	100.0	1 64	100.0		100.0	64	100.0	64	100.0	(} 64}		1 64:	100.0		
Reporter	7		15	23.4	15		17		17;	26.6) 64 . I 14.	21.9	15;		1 16:	25.0	1 17	
Non-reporter	57		49	76.6	49				47	73.4	50	78.1	49:		48:		47	
gnt just: Elig Nov to May	-		1 1				1				, 50,		1	,,,,	1 -0,	,,,,	1 7/	
Total	67	100.0	67	100.0	67	100.0	67	100.0	67	100.0	67	100.0	67	100.0	67	100.0		10
Reporter	5;		6	9.0	11		15		16	23.9	16	23.9	18		14	20.9	12	
Non-reporter	62		61	91.0	56		52		51	76.1	51	78.1			53.	79.1		
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Total	581	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	100.0	58	10
Reporter!	5	8.6	5	8.6	6	10.3	13	22.4	17	29.3	20	34.5	20	34.5	[21	36.2	18	3
Non-reporter	53	91.4	53	91.4	5.2	89.7	45	77.8	41	70.7	36;	65.5	38	65.5	37	63.6	40	6
ight just: Elig Jan to May	1		1 1		4		t I		l)		1 1		1 1		1	ļ
Tote1	54	100.0	54	100.0	54		54			100.0			54		54	100.0	54	
Reporter	4	7.4	5	9.3	5		5	9.3		18.5		18.5	10,		111	20.4	111	
Non-reporter	50	92.6	49	90.7	49	90.7	49	90.7	44;	81.5	44	B1.5	44;	B1.5	43	79.6	43	1 7
lig January 92 only			I				1 1		1		1 1		1 1		1 1		1	1
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Reporter		0		0		-		0	- 1		11	2.8	1 1		1	2.8	1 1	
Non-reporter,	36	100.D	36	100.0	36	100.0	36	100.0	34	94.4	35	97.2	35	97.2	35	97.2	35	. 9
month spell: Jan to Feb	,	100.0	1 6	+nn n		100 0	1 4	100.0		100 D		•00.0		100 0	1	100 0		(; 10
Total				100.0	6		6;		6 11		6 6 2	100.0 33.3	6 ! 2		1 1	100.0 16.7		
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Total	9	100.0	, Pi	100.0	. 9	100.0	9	100.0	9	100.0	9:	100.0	. 9	190.0	. 0	100.0		1 10
Non-reporter	9		9	100.0		100.0	9			100.0	9:	100.0		100.0	- 1	100.0		10
month spell: Jan to Mar			i		1	1			i -		1				1		i	1
Total	4	100.0	i 4	100.0	4	100.0	. 4	100.0	4.	100.0	1 4	100.0	4	100.0	4	100.0	i 4	10
Non-reporter	4	100.0	i 4i	100.0		100.0			I 41	100.0	4	100.0	4			100.0	4	
month spell: Dec to Feb	i		į į		i		!		i		i		i i	i	i i		i i	
Total	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	51	100.0	5	10
Reporter	0	0	0;	0	0	0	0	0	1	20.0	1 1	20.0	1 01	0	01	o	0	1
Non-reporter	5	100.0	5	100.0	5	100.0	5	100.0	4	80.0	4	80.0	J 5	100.0	51	100.0	5	10
month spell: Nov to Jan			1 1		i .		1 1				1 1			l	1 1		1	ì
Total		100.0		100.0	9	100.0		100.0		100.0		100.0	(P	100.0		100.0		10
Non-reporter		100.0		100.0		100.0		100.0	9	100.0		100.0		100.0	9	100.0	9	110
month spell: Jan to Apr			1 22					.~~ ^		100 -			! .!		1	400 5		
Total		100.0		100.0		100.0		100.0		100.0		100.0	. ,	100.0		100.0		10
Reporter						0 100.0		100.0						9.1		9.1		!
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		100.0	1 34	100.0) ; 34	100.0	1 24	100.0	 34:	100.0		100.0	 1947	100.0	1 341	100.0	34	{ ; 10
Total						8.8	34					14.7		11.8				
Mon-reporter		94.1				91.2		91.2		88.2		85.3		88.2		11.8 88.2		(8
month spell: Nov to Feb			347			1							. :		1 301	₩ 3.2	1 .	
Total		100.0				100.0	27	100.0		100.0		100.0		100.0		100.0		1 10
Reporter		7.4				111.1		22.2				18.5		3.7		3.7		10
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TABLE A-1
ELIGIBILITY SPELLS FOR MATH SIPP - Continued

Universe: All Eligibles, Total

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Total	35	100.0	35	100.0	35	100.0	35	100.0	35	100.0	35	100.0	35	100.0	35	100.0	1 35	100.0
Reporter	3	8.8	41	11.4									11	2.9	•			
Won-reporter	32	91.4	31	88.6	31	86.6	3.2	81.4	31	86.6	33	94.3	34	97.1	34	97.1		
month spell: Dec to Apr	i		i i		i		1		1		i i		i i		i i		i i	
Total	111	100.0	i 11i	100.0	111	100.0	1 11	100.0	111	100.0	11	100.0	111	100.0	111	100.0	11.	100.0
Reporter	2:	18.2	21	18.2	31	27.3	i 3	27.3	31	27.3	4	36.4	3	27.3	3	27.3	3	27.3
Mon-reporter		61.8	91			72.7		72.7	. ,			63.6	81					72.7
month spell: Nov to Mar	1		1		i i		i i		i i		i		i		i i		i ī	
Total	3	100.0	3	100.0	31	100.0	i 3:	100.0	31	100.0	31	100.0	3	100.0	3	100.0	3	100.0
Reporter	0	0	0				,						1 1	33.3	1	33.3		
Non-reporter	3	100.0	3	100.0	3	100.0	2					100.0	2				. 2	
month spell: Oct to Feb	i		i i		i				i		i		ì i		i i		1	-
Total	71	100.0	71	100.0	71	100.0	7	100.0	7	100.0	7)	100.0	71	100.0	7	100.0	7	100.0
Reporter		14.3	2	28.6		14.3						14.3		14.3				
Non-reporter		85.7	5		6	85.7		85.7	7	100.0	6	\$5.7	81	85.7	7	100.0	7:	100.0
month spell: Nov to Apr	i		i i				1		1		i		i i		1 1		i i	
fotal		100.0	9	100.0	D i	100.0		100.0		100.0	9	100.0	9	100.0	. 0	100.0	9	100.0
Reporter	1.1	11,1	1 1:	11,1	. 0	c		0	0	o	1 1	11.1	1 1	11.1	1	11.1	1 11	11.1
Non-reporter	8;	88.9	8	86.9	9;	100.0	9	100.0	9	100.0		86.9	8	88.9	8	88.9		86.6
month spell Oct to Mar :	1		I i		ı i		1		! (1 1		i ı		1		1	
Total	8	100 0	6	100.0		100.0		100.0	. 8	100.0	8	100.0		100.0		100.0	6	100.0
Reporter	0	٥	1.	16.7	11	16.7	1.1	16.7	11	18.7	1 1	16.7	1 1	16.7	. 0	0	0	
Mon-reporter	6	100.0	5	83.3	51	83.3	5	83.3	5	83.3	5	83.3	5	83.3	6	100.0	6	100.0
ner Multiple Spells	1		1		ı i		1 1		i				i				i i	
Total	376	100.0	376	100.0	376	100.0	376	100.0	376	100.0	376	100.0	378	100.0	376	100.0	376	100.0
Reporter!	73	19.4	72	10.1	70	18.6	78	20.7	86	22.9	85	22.6	85	22.6	96	22.9	80.	21.3
Mon reporter	303	90 .6	. 304	BO . G	306	81.4	298	79.3	290	77.1	201	77.4	301	77.4	290.	77.1		

Meighted (in 1000s) for (Universe: All Eligibles)

		:P	0	T	#0	ν	i Di	EC	J	u i	į PI	EB		•	i M	4 8	j w	lY.
	 Total		 Total	•	 Total		 Total		Total		 Total		 Total		 Total	•	; 	
····	!		!		1)	!			!	!	<u> </u>		!!!		1 I	
ota1	12,951	100.0	12,951	100.0	12,051	100.0	 12, 9 51	100.0	 12, 9 51	100.0	12.951	100.0	 12,951	100.0	 12,951	100.0	12,951	100
lig Throughout	1		1 1		1 1		1 1	1	1 1		1		1 1	!	i (1 1	1
Total		100.0			9,875		9,875		9,875	100.0			9.875				9,875	
Reporter				53.0	5,310	53.B	5,375		5,456	55.3			5,395			54.3	5,263	
Won-reporter	4,896	47.6	4,637	47.0	4,565	48.2	4,500	45.6	4,418	44.7	4,440	45.0	4,478		1 4,512	45.7	4,612	46
eft just: Elig Bep to Apr Total	220	100.0	1 330	100.0		100.B									1			
Reporter		23.4	61		238	27.0			; 230 65	100.0 27.3	238		236	100.0 28.8	238	100.0	238	
Won-reporter		76.6	177		174				,,		159		189			71.2	198	
eft just: Elig Sep to Mer			1	, , , ,	1 1	70.0		74.0	1 1	76.7	, , ,	70.4	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	77.2	, 100, I I		1 1	3 00.
Total		100.0	177	100.0	177	100.0	1 1771	100.0	177	100.0	177	100.0	177	100.0	177	100.0	177	100.
Aeporter			44	24.8	46				49	27.4	47		51			17.9	25	
Mon-reporter		77.1	,	75.2	131						130							
eft just: Elig Sep to Feb			1 1								,		1		1 1		,,	
Total		100.0	109	100.0	109	100.0	106	100.0	109	100.0	106	100.0	109	100.0	109	100.0	109	100
Reporter		17.6	19	17.8	19	17.6			221				10		10	8.8	1 5	
Non-reporter			. ,	82.4	90				87				90			91.2		
eft just: Elig Sep to Jan	1		, ,										1		1		1 1	
Total	143	100.D	1 143	100.0	143	100.0	143	100.0	143	100.0	143	100.0	143	100.0	143	100.0	143	100
Reporter			52	36.3	52	36.3	52		48	33.9	45		45				45	
Non-reporter		62.6	91				91		94	66.1	97		97			68.2	97	
ight just: Elig Oct to May			i i		i i		i				1		i		1		i i	
Total	194	100.0	194	100.0	194	100.0	194	100.0	194	100.0	194	100.0	194	100.0	194	100.0	194	100
Reporter		8.1	37	19.0	37	19.0	41	21.1	39	20.0	30	15.4	33	17.1	35	18.1	37	19
Non-reporter		91.9	158	81.0	158	81.0	153	78.9	155	80.0	185	84.6	181	82.9	158	81.9	158	
ght just: Elig Nov to May	!		i i		i i			l			i i		1				j 1	
Total		100.0	185	100.0	185	100.0	185	100.0	185	100.0	185	100.0	1 185	100.0	185	100.0	185	100
Reporter	18	9.6	20	10.8	30	18.4	36	19.3	39	20.9	39	20.9	37	19.8	341	18.3	29	15
Non-reporter		90.4	165	89.2	1 155	63.6	150	80.7	147	79.1	1 147	70.1	149	80.2		81.7	157	
ight just: Elip Dec to May	i		1 1		1 1		i i		i i		i i		i i		i		i	
Total	148	100.0	148	100.0	148	100.0	148	100.0	148	100.0	148	100.0	148	100.0	148	100.0	148	100
Reporter		10.5	14	9.6	17	11.8	34		44	28.5			49	32.9	52	34.9	44	28
Non-reporter		B9.5	134	90.4	131	88.4	114		104	70.5	98	66.2	99			65.1	104	
ight just: Elig Jan to May							i i	1			i i		1				i 4	1
Total	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100
Reporter		7.8	14	9.1	14	9.1	14	9.1	25	16.4	25	16.4	25	16.5	28	18.0	27	17
Non-reporter		92.1	141.	90.9	141	90.9	141	90.9	129	83.6	129	83.6	129		127	82.0	128	82
lin January 92 only	1				1 1						1		į į	ı	i i		1 1	
Total	93	100.0	93	100.0	B3	100.0	93	100.0	93	100.0	93	100.0	93	100.0	93	100.0	93	100
Reporter	0	0	0	0	0	0	. 0	0	6	6.6	3	2.9	3	2.9	3	2.9	3	2
Non-reporter		100.0	93	100.0	93	100.0	93	100.0	87	93.4	90	97.1	90	97.1	90	97.1	90	97
month spell: Jan to Feb	1						()	l	}		1	ļ.	1	1	1 1		1 4	i
Total	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	10	100.0	16	100.0	16	100.0	16	100
Aeporter	0	0	0	٥	. 0	0	0	0	3	16.0	5	31.9	5	31.9	3	16.D	, 3	16
Won-reporter		100.0	16	100.0	16	100.0	16	100.0	14,	84.0	11	68.1	111	68.1	14	84.0	1 14:	84
month spell: Dec to Jan	i		i i		1 1)				1		1	1	1 1		1 1	1
Total	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23.	100.0	23;	100
Non-reporter		100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100
month spell: Jan to Mar			1		1		l i	ı	l i		1	1	1	1	1 1		1 (1
Total	10	100.0	10	100.0	10	100.0	10	100.0	10	100.0	10	100.0	10	100.0	10	100.0	10	100
Non-reporter	10	100.0	10	100.0	10;	100.0	10	100.0	10	100.0	10	100.0	10	100.0	1 10	100.0	10	100
month spell: Dec to Feb	i 1		1 1		1)		()		1		1	l	1		1 1	ı
Total	13:	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13	100.0	13!	100.0	13;	100
Reporter	0;	0	(O	0	0	0	. 0	. 0	2	16.6	2	16.8	; 0	0	0		0	
Non-reporter	13.	100.0	131	100.0	13	100.0	13	100.0	(11)	83.4	()	83.4	13	100.0	13	100.0	1 13;	100
month spell: Nov to Jan			1 1		1		()	i	1		1	1	1	l	1		1	
Total	23	100.0	23	100.0		100.0		100.0		100.0	,	100.0		100.0		100.0		100
Non-reporter	23.	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100
month spell: Jan to Apr	1) 1) :		!	l			i .		1	i	J.	Į.	1 .)
Total	65,	100.0) 6 5	100.0	65	100.0	65	100.0	5 5	100.0		100.0		100.0	65	100.0		: 100
Reporter	0;	0	; 0;	0	0	0			7			10.1	7	10.1	7			1 5
Non-reporter	65)	100.0	85	100.0	65	100.0	65	100.0	56	89.9	58	89.9	58	89.9	58	89 . D	į 6 1	Į 9 -
month spell: Dec to Mar	İ		1		,		1				1		į l	ŀ	1	l	1	1
Total		100.0	108	100.0	108	100.0	108	100.0	108	100.0	108	100.0	108	100.0	108	100.0	108	10
Reporter		3.8	j 4	3.8	6	5.4		5.4	8	7.0	14	12.5	8	7.0	1 12	10.7	5	:
Non-reporter			104	96.2	102	P4 . 6	102	94.6	100	93.0	94	87.5	100	93.0	96	89.3	106	. 96
month spell: Nov to Feb	1		1		1		1				f		1		i i		1	1
Total	91	100.0	j 91	100.0	91	100.0		100.0		100.0		100.0	91	100.0	1 91	100.0	1 91	100
Reporter	5	5.2	5	5.2	7	7.7	17	19.0	14	15.7	14	15.7	2	2.3	2	2.3	2	į .
Non-reporter		P4 . 8		94.B	84	92.3	74	81.0	77	84.3	77	84.3	I AR	97.7		97.7		9

TABLE A-1
ELIGIBILITY SPELLS FOR MATH SIPP - Continued

Meighted (in 1000s) for (Universe. All Eligibles)

ļ	₩.	•		τo	#0	v	DE	EC .	د ز	w	PE	23	**			19.		AY.
!			İ				ļ								1		1	
·	Total	•	Total		Total	•	Total	•	Total	•	Total	•	Total	•	Total	•	Total	•
	1		!				1 1		1		! !							
month apell: Oct to Jan (1		1	1			1 1		1 ;		1 1] i			l		1
Total	97	100.0	1 92	100.0	92	100.0	82	100.0	92	100.0	92	100.0	82	100.0	92:	100.0	92	100
Reporter		9.0	1 11	12.0	121	13.3		9.8	12	13.3	6	6.0	3 1	2.8	3	2.8	3	2
Mon-reporter	8 3	BO . 1	81	88.0	80	86.7	83	90.2	90	86.7	87	₽4 .0	80	97.2	90	97.2	80	97
wonth spell: Dec to Apr			1	I	i i		i i		i i		1 1		1		1 1	1	1 +	†
Total	48	100.0	48	100.0	48	100.0	48	100.D	48	100.0	48	100.0	48	100.0	48	100.0	48	100
Reporter	71	13.7	7	13.7	10;	20.6	. 9	19.0	. 9	19.0	12	25.5		18.4	9	18.4	19	40
Mon-reporter	41	86.3	41	66.3	36	79.4	39	81.0	30	81.0	35	74.5	30	81.6	30	81.6	29	00
month spell: Wow to Mar	i i		1	1	i i		i i	1	i i		i i		1 1		1 1	ı	1 1	1
Total	15	100.0	15	100.0	15	100.0	15	100.0	15	100.0	15,	100.D	15	100.0	15	100.0	15	100
Reporter	0		0 0	. 0	. 0	0	10	67.5	10	87.5	. 01	0	10	67.5	101	87.5	10	67
Non-reporter	15	100.0	1 15	100.0	15	100.0	5	32.5	5	32.5	15	100.0	5;	32.5	5	32.5	5	32
wonth spell: Oct to Feb	1		1	İ	i i		i i				, ,		1 1		1 1	í .	1 1	i
Tota)	16	100.0	16	100.0	16	100.0	16	100.0	16	100.0	18	100.0	181	100.D	181	100.0	1 16	100
Reporter	2)	14.1	1 4	25.3	21	11.2	1 2	11.2) 0	0	2	11.2	2)	11.2) D:	9) D)	١
Non-reporter	14	65.9	12	74.7	14	8.88	14	86.8	16	100.0	14	86.8	14	66 . B	16	100.0	1 16	100
month spell: Nov to Apr	i		1	4	ı i		1				ı i		1 1		1 1	1	1	ı
7otal	25	100.0	25	1 100.0	1 25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	100
Reporter	2	9.2	1 2	9.2	0	0	0	0	0	0	2	8.5	2	8.5	2	8.5	2	
Non-reporter	23	90.8	23	90.8	25	100.0	25	100.0	25	100.0	23	91.5	23	91.5	23	91.5	23.	. 9
month spell: Oct to Mar	i i		İ	1			1 1	ı	1	i	1		1		1 1	1	1 1	1
Yota)	18	100.0	18	100.0	18	100.0	18,	100.0	i 18	100.0	18	100.0	18	100.0	18.	100.0	18	100
Reporter	0:		D 3	19.0	3	19.0	3	19.0) 3;	19.0	1 3:	19.0	3	19.0	0	. 0	oj oj	i
Non-reporter	18	100.0	15	81.0	15	B1.0	15	81.0	15	81.0	1 15	B1.0	15	B1.0	18	100.0	18	100
mer Multiple Spells			1	į.	j i		ı i	i	1	1	1		1 1		1 1	1	1 1	1
Totel	1,072	100.0	1,072	100.0	1,072	100.0	1,072	100.0	1,072	100.0	1,072	1D0.0	1,072	100.0	1,072	100.0	1,072	100
Reporter	187	17.4	183	17.1	179	16.7	195	18.2	218	20.3	218	20.3	217	20.2	226	21.0	212	16
Nor-reporter	885	82.6	889	82.9	894	83.3	877	81.8	854			79.7	855	79.8	847	79.0	860	BC

Universe: Eligible Reporters (Unweighted)

		P) oc	:T) 🙀	ov	į Di	EC	į	W	i Pi	EB	į .	~ 3	į a	*		AY
	 Total	•	 	•	 Total	4	 Totel		 Total	•	 - Totel		 Total	1	 Totel	•	i i ! Total	•
	i :		i]		! !	1	I I		1) 	l I	! !	1 1		1 1	1
otal	2,212	100.D	2,212	100.0	2,212	100.0	2,212	100.0	2,212	100.0	2,212	100.0	2,212	100.0	2,212	100.0	2,212	100
Lig Throughout	1 4 570		1 1						1				1		! !		1	
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	1,978	
Reporter			1,842				1,925		1,978						1,874			
Non-reporter	173	8.7	136	6.0	90	5.0	53	2.7	. 0	0	37	1.9	75	3.8	104	5.3	142	. 7
oft)ust: Elig Bep to Apr Total	29:	100.0	29	100.0	29	100.0	29	100.0	, , , 29;	100.0	29	100.0	1 30	; 100.0	1 20	100.0	1 29	100
Reporter			26						29				27					
Non-reporter										٥٠								
ft just: Elig Sep to Mar			i i				i -i		, -,	-				1	1 1		i,	
Total		100.0	171	100.0	17	100.0	17	100.0	17	100.0	17	100.0	j 17	100.0	17	100.0		10
Reparter	1 12	70.6	13	76.5	14	82.4	17	100.0	[17]	100.0	15	88.2	15	86.2	P	52.9		4
Non-reporter	51	29.4	4	23.5	3	17.6	0	0	1 01	0	2	11.8	. 2	11.8	8	47.1	P1	5
ft just: Elig Bep to Feb	1 1		1 3] [1	l	1	ŀ	1 , 1		i . 1	1
Total		100.0	9;	100.0	9	100.0	1 9		1 91	100.0	1 9:	100.0		100.0	9	100.0	9	10
Reporter	6	98.9	8;	Ø8 . B	8	88.Q	B	9.98	9	100.0	9	100.0	5	55.6	5	55.6	3	3.
Non-reporter		11.1	1 11	11.1	1 1	11.1	1 1	11.1	1 0	0	(D.	0	4	44,4	41	44,4	6	
ft just: Elig Sep to Jen			1 1)		1 1	45-	!!!		!		!)		1	
Total			9	100.0		100.0			9			100.0		,	9	100.0	9:	
Reporter		100.0	9	100.0	9					100.0	1 7		7				7,	
Non-reporter ght just: Elig Oct to May		0	. 0	0	D :	0	. 01	. 0	0	0	. 2	22.2	1 2	22.2	2	22.2	2	2
gnt just: Elig Oct to may Total		100.D	17	100.0	1 17	100.0	, I	100.0	! ! 17]	100.0	1 17	100.D	! 17	100.0	1 1 J 17/	100.0] ; 17;	10
Meporter			1 14;	82.4	14	82.4									1 131	76.5	1 14	
ion-reporter			3	17.6	3				, ''' O;			17.6	•				3	
int just: Elig Nov to May							. '	, ,. .	1 1				i	<i></i>		_3.5	1 1	
otal	16	100.0	16	100.0	16	100.D	16	100.0	, ,	100.0		100.0	16	100.0	16	100.0		
leporter		25.0	5	31.2	10				16		16		13		10	82.5	9	
on-reporter	12,	75.0	111	68.8		37.5	1	6.2	0	0		0	3	18.8		37.5	7	4
ht just: Elig Dec to May	1 1		1		i j		1		1		1	i	İ	ŀ	i I		1 1	
lota]	[17]	100.0	171	100.0	17;	100.0	17)	100.0	17	100.0	17	100.0	17	100.0	17	100.0) 17)	10
leporter	5	29.4	5	29.4	6.	35.3	13	76.5	17	100.0	17	100.0	16	94.1	14	82.4	[14]	8
on-reporter	12;	70.6	12	70.6	11	84.7	41	23.5	0	0	0		. 1	5.9	3	17.6	i 3	1
ht just: Elig Jan to May	1 1		1		1 :		1 1	l	1 1		1	1	1	1	1 1		1 (
otal	10;	100.0	10!	100.0	10	100.0	10	100.0	10)	100.0	10:	100.0	10	100.0	10	100.0	10:	10
le porter	2	20.0	3	30.0	3	30.0	3	30.0	101	100,0	10	100.0	9	90.0	9	90.0	8	6
ion-reporter	8	80.0	7	70.0	7	70.0	7 7	70.0	[D;	0	0	0	1	10.0	1 11	10.0	1 2	2
ig January 92 only	1 1		1		i f		1 1		1 1		f 1		1	1 '	f f		1 (
Tot#1				100.0		100.0			2			100.0		100.0		100.0		
Reparter		0			0	0			2		•		1 1			50.0	1 1	
Non-reparter	2	100.0		100.0			5	100.0	0	0			1		1 1	50.0	1 1	5
month spell: Jan to Feb	1 1	100.0		100.0		100.0	1 1	100.0	1 1	100.0		100.0		! 100.0	1 1	100.0	1 1	10
Total				100.0								100.0	i 1		0			
Non-reporter		100.0		100.0	11			100.0										10
month spell: Dec to Feb	1 1		1	,00.0			1		, ,	-	,		1	,	1 1		i i	
Total	. 1	100.0		100.0	1	100.0		100.0				100.0	,	100.0	1 1	100.0	1 1	10
Aeporter				0		0			1 11									
Non-reporter		100.0		100.0				100.0			•			100.0				10
month spell: Jan to Apr	i i		í í				1 1		i i		į .		i	ĺ	i i		i í	
Total	2	100.0	. 2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	10
Reporter		0	0;	0	0	. 0			2	100.0	2	100.0	2	100.0	į 2	100.0	j 1)	
Non-reporter	2	100.0	21	100.0	2	100.D	2	100.0	0	0	0	0	0	1 0	0	0	1	5
month spell: Dec to Mer	i i		1 1		ı i		1	l	1 1		1	ł	ł	1	1 1		1	!
Tota)				100.0	4			100.0		100.0		100.0	*	100.0				10
Reporter			2		3			75.0	41	100.0	1 4	100.0	4	100.0	3			2
Non-reporter	1 21	50.0	2	50.0	1	25.0	1 1	25.D	. 0	0			. 0	. 0	[1]	25.0	31	7
month spell: Nov to feb	! .!	100.0	! !	100.0		100.0	1 -	100.0	! !		<u> </u>	100.0	1 -	100.0	, .	100.0	1 6	10
otal		100.0		100.0				100.0	5	100.0		100.0		100.0		100.0 20.0		, 10 1
Neporter			2 3															
Won-reporter		6 0.0	, 3	₩.0		-0.0	, 0	١	, J	U	, ,			,0	. •	٠.0	(1	. '
Total		100.0	1 4	100.0		100.0	j 4	100.0	4	100.0		100.0		100.0	, , , 4	100.0	4	10
Neporter			3	75.0		100.0		75.0										
ion-reporter			1 1					•										
sonth spell: Dec to Apr		· -	1	•			()				i		i		1			
otel		100.0] 3	100.0	3	100.0	3	100.0	1 3	100.0	1 3	100.0	1 3	100.0	3	100.0	j 3	10
leporter								100.0				100.0						
on-reporter															i •1			
onth spell: Nov to Mar			1 i		ı		1 1	l	1 (i i	İ	1	1	ŧ i		i i	
otal		100.0	1 1	100.0	(1)	100.0	1 1	100.0	11	100.0	[1	100.0	1 1	100.0	1	100.0	1 1	10
onth spell: Nov to Mar	1 !		1		1 1		1 1		1 1		! !		1	(_ ((1		1 1	
leporter				0				100.0	1 1					100.0		100.0		10
Ion-reporter		100.0	1 11	100.0	1 1	100.D	. 0	. 0	. 0	D	1 1	100.0	1 0	0	. 01	0	01	
month spell; Oct to Mar			1				!		ļ .		!		1				1 1	
[otel				100.0		100.0		100.0		100.0		100.0		100.0		100.0		10
Meporter			1					100.0) 1/			100.0		100.0				
ion-reporter	1 1	100.0	0	0	D	. 0	0	. 0			. 0	. 0	. 0	. 0	! !!	100.0	•	10
mer Multiple Spells	!		1				!	100 -			!	100 0	!					
[ot#]				100.0		100.0		100.0		100.0		100.0		100.0				10
eporter	, 57)	66.3	1 62	72.1	63	73.3	74	86.0	B61	100.0	; 78	90.7	73	84.9	60	80.2	64	1 7

TABLE A-1 ELIGIBILITY SPELLS FOR MATH SIPP - Continued

Meignted (in 1000s) for (Universe: Eligible Reporters)

	•	. P	000	:T	i wa	IV	, DE	c	JA	N	, FE	B 	i •	A		R	i ••	14
	! }		 Total	•	 Total	•	 Totel		Total	,	 Total		 Total		f }	,	 Total	1
		-			i i						1 1							
ptal Lig Throughout	8,079	100.0	6.070	100.0	6,079	100.0	6.079	100.0	8,079	100.0	8.079	100 . D	6,079	100.0	6,079;	100.0	8,079	; 100
Total	5,456	100.0	5,456	100.0	5,456	100.0	5,456	100.0	5,456	100.0	5,456	100.0	5,456	100.0	5,456	100.0	5,458	100
Reporter			5,108	93.6		95.3								96.4	5,189	95.1	5,078	
Mph-reporter			349	6.4	755	4.7	142	2.6	0	0	102	1.0	198	3.6	267	4.0	378	. 6
eft just: Elig Dep to Apr Total	; ; 65		! ∣ 65∣	100.0	! } 865∣	100.0	l l ⊧ &≲;	100.0	. an	100.0	l 1 I 65∶	100.0	1 65	100.0	65	100.0	! #5	! 100
Reporter			1	90.6						100.0			1				36	
Non-reporter	12	17.7	(6)	9.4	3	4.5	(6)	9.4	01	0	[1]	1.7	3 (4.6	j 3;	4.6	(29	- 44
eft just: Elig Sep to Mar	1		1 1			400.0	! !		49	100.0	49	100.0	49	100.0	49	100.0	1	100
Reporter		100.0				100.0		100.0		100.0							21;	
Non-reporter										D								
eff just: Elig Bep to Feb	1		i i		1 1		i I		1		1 1		1 1		1 1		1 (į.
Total		100.0	22	100.0	22	100.0 88.6	j 22 j i 18 i	100.0 82.9	22	100.0		100.0	1 10		J 22	100.0	1 27	
Mon-reporter						11.2				100.0		100.0					17	
eft just Elig Sep to Jan			1 1		i		j j		ı	-	i i		1		1. 1		1 1	1
Total		100.0	48	100.0	48			100.0					48				48;	,
Reporter		100.0	48.					100.0	48	100.0		87.7	- ,	_			42	
Non-reporter		O): 0 !	0	i 0;	0	; 0 ;		0	O	6		1 6;] 6]	12.3	1 6:	: 12
Total		100.0	39	100.0	30	100.0		100.0		100.0	30	100.0			30	100.0	39	100
Reporter			33;	84 . 8	33,					100.0	30		28			72.3		76
Non-reporter		62.7	. 81	15.2		15.2	1 2	4.5	0	0			111	27.7	1 11	27.7		23
ght just: Elig Nov to May Total	39	100.0	39	100.0	1 30	100.0	1 340:	100.0	36	100.0	30		39,	100.0	1 39	100.0	1 39	100
Reporter		35.5		41.4			36		30	100.0		100.0	32	81.9	26.			
Non-reporter	25	84.5	23	58.6	j 12 :	31.9	3	7.0	0	0	(C	0	7	18.1	13	32.4	16	41
ght just Elig Dec to Mary	! ! 44:		1 44	100 . D	1 44	100.0	j j	100.0	44	100.0	1 1	100.0	44	100.0	1 44.	100.0	1 !	~
fotm) Seponter		35.6	14.				34					100.0	40:			83.1		100
on-reporter			29	67.5			10			0			3				7	
nt just Elig Jen to May	. 4		ţ .		1 1		1 1		1		1				1		1	1
[ots]				100.0		100.0		100.0				100.0		100.0		100.0		
Neporter		25.4 74.6		32.8 67.2			ի 8-ի յ 17-ի			100.0	-				: 22; ! 31	86.6 11.4	70	
ig January 92 only		,, ,	1 1	0, 1		07.1	, .,,	u, .2		Ü		·	1 1				1 3	
Total		100.0	6	100.0	6	100.0	. 6	100.0	6			100.0	i ei		ı ei	100.0	6	100
Reporter		0		0	-	-							3 \				3	
Non-reporter	l 6;	100 0	i 6,	100.D		100.0	; 6. 1 1	100.0	נים : י	0	3	55.7	3	55.7	3,	55.7	3:	
Potal		100.0	3	100.0	3	100.0		100.0	3	100.0	3	100.0	3:	100.D	3	100.0	1 3	
Aeporter		0	0	0	, O	0		0	3	100.0	3	100.0	3	100.0	0	0	0	
ion-reporter	3.	100.0	3	100.0	1	100.0	3	100.0	0	0	0.	0	0	0	3.	100.0	3	100
morth spell: Dec to feb.		100.0	7 2	100.0] 2	100.0		100.0	2.	100.0	1 2	100.0	. 9	100.0	1 2	100.0	1 1) 100
Neporter		0		0					2			100.0	0;	0				
ian-reporter		100.0	į 2 ₁	100.0	, 2,	100.0	2,	100.0	0	0	0	0	2	100.0	2 (100.0	2.	100
month spell: Jan to Apr	1 1		1 _1		1 _1		[[1 1		1 1		1 1	
fota) Neporter		100.0		100.0		100.0		100.0		100.0	7 71	100.0		100.0 100.0		100.0 100.0		100
ion-reporter		100 0	7.	100.0		100.0		100.0		0.0		0.0						
onth spell: Dec to Mar			i i		I I				1	•					1	_	1 1	1
otal						100.0		100.0				100.0		100.0		100.0		10
eporter		54.7		54.7	•	77.3		77.3 22.7		100.0		100.0		100.0		73.5		2
on reporter			1 31	45.3	, 21 1	22.7) 2\ 		, u .	0	1 6	-	1 1	-	1 1		1 2:	
otel		100.0		100.0	14.	100.0		100.0	14	100.0		100.0		100.D		100.0		; 10
eporter	5:	32.8	5			49.3		100.0		100.0		100.0		14.7				1
ion-reporter													12	85.3	12	85 .3		8
onth spell: Oct to Jøn stal		100.0		100.0		100.0	 12	100.0		100.0	1 12	100.0	1 12	100.0	121	100.0	1 12	10
eporter						100.0		73.4		100.0				21.0				2
on-reporter	7:		3	26.6		0		26.6	0	D		55.3				79.0		7
onth spell Dec to Apr					1 1			100.0		400.0					1		1	
otej		100 .0 37 .6		100.0 37.6		100.0 74.0		100.0		100.0 100.0		100.0	9 6			100.0 62.4		10
on reporter							0	0		0								6
onth spell: Nov to Mar	1 1		1 1		1 1		ı i				l l		i i		i i		t t	
ote1		100.0	10	100.0	10	100.0	10	100.0	10	100.0		100.0	10)	100.0	10	100.0		10
onth spell: Nov to the percepter		0	. 0:	o	i i	0	: 10:	100.0	10.	100.0	. 0	0	1 10	100.0	1 10	100.0	101	10
eporter on reporter		100.0		100.0		100.0						100.0						
onth spell: Oct to Mar					i i		i i	•	1	•	i		, ,	•	1		1	
otel		100.0	, -	100.0		100.0		100.0				100.0		100.0		100.0		100
Meporter				100.0		100.0		100.0				100.0		100.0		100.0	1 1	 104
ion-reporter		100.0		U	, 01	U	i i	U		U	1	U	, 4	0	1 1	i uu. u	1 3	
otal		100.0		100.0	218	100.0	. ,	100.0	,	100.0		100.0	218	100.0	218	100.0	,	
eporter				71.5	158	72.7	185	84.7			201	92.0		80.1			165	
on-reporter	74:	33.8	62	28.5	1 80	27.3	33.	15.3	0;	0	17 -	8.0		13.9		20.0		. 2

Universe: Eligible Non-Reporters, Total

	i #8) oc	7	i **) v	De	EC .		₩	i re	28	ì 	V	i ~	**		lY.
	 Total	•	 Total	•	 Total		i 	,	Total		 Total		 Total		i i Total i	,	 Total	
			1 1		I I		[))				1 1		1	
rote1	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.0	2,403	100.
lig Throughout	1		1 1		1		1		1	١	l l		1	١	‡ I		1 1	
Total				100.0		100.0	1,554			100.0		100.0	1,554			100.0		
Reporter		3.0	491	3.2		2.5			0			1.9	51		86	4.2		
Non-reporter	1,494	96.1	1,505	96.8	1,515	97.5	1,533	98.6	1,304	100.0	1,525	98.1	1,503	96.7	1,488	95.8	1,483	95
eft just: Elig Bep to Apr Total	(} 6 6	100.0	66	100.0	. 66	100.0] 66	100.0		100.0	. 00	100.0	86	100.0		100.0	i 86 i	100
Reporter			1		, .				0		,,		, 2	,	1 2		, 60, 1 11	
Non-reporter				98.5	,	98.5				100.D			64		84		65	•
eft just: Elig Sep to Mar	-		i ~i		. ~	-5.5	. ~			,	1				1		i	
Total		100.0		100.D	44	100.0	441	100.0	44	100.0	44	100.0	44	100.0	44	100.0	44	100
Reporter		8.8	3	8.B	3	8.8			0	0	j 9)	2.3	3	8.8	3	5.8	1 21	4
Non-reporter	41:	93.2	41	93.2	411	93.2	44	100.0	44	100.0	43	97.7	41	93.2	411	93.2	42	95
eft just: Elig Bep to Feb	1 1		1 1		i -1		į į	1			1 1		1	l	1 1		1 1	i
Total	33	100.0	33	100.0	33	100.0		100.0	33	100.0	33	100.0	33	100.0	33	100.0	33	100
Won-reporter		100.0	33	100.0	33	100.0	33	100.0	33	100.0	33;	100.0	33	100.0	33	100.0	33	100
eft just: Elig Sep to Jan			1		! !		1 1			•	! !		1				1 1	
Total				100.0	34			100.0		100.0	•	100.0		100.0		100.0		100
Reporter			11		1 1	2.9	1 1		0				1 1		1 1		1 1	
Non-reporter	32	94.1	33	97.1	33	97.1			34	100.0	33	97.1	33	97.1	33	97.1	33	97
ight just: Elig Oct to May	!!		1		1) 					100.0		100.0	!		1 47	! . 100
Total		100.0		100.0	47			100.0		100.0						100.0		
Reporter			1 1	2.1 97.9	1 46	2.1	1 1	, -	0			; 0 100.0					3 44	
Non-reporter		97.9	46.	97.9	40	97.9	46	97.0	47	100.0	1 1/	100.0	45	₩ 3. /	44	¥3.6	441	. 83
ight just: Elig Nov to Way		100.0		100.0		100.0	5.1	100.0	5.	100.0	5.1	100.0	. 51	100.0	1 61	100.0	51	100
Total			1 1!		1 1		0		0					•			3	
Reporter			50.					100.0		100.0		100.0						
Mon-reporter		J G.0		20.0	,,	₩0.0	, 5,,			100.0	, ,,,	100.0	, ~	1	1		, -0	
Total	1 41	100.0	41	100.0	41	100.0		100,D	41	100.0	41	100.0	41	100.0	41	100.0	1 41	, . 100
Reporter				0		0	,						1 4		7		41	
Non-reporter		100.0		100.0		100.0		100.0		100.0			37				37	
ight just: Elig Jan to May	1 1		1		1		1			1	i			1	1		1 1	l
Total	44	100.0	44	100.0	44	100.0	44	100.0	44	100.0	44	100.0	44	100.0	44	100.0	44	100
Aeporter		4.5	21	4.5	2	4.5	2	4.5	ρ	. 0	ا ا	٥	i •	2.3	2	4.5	3	
Non-reporter		95.5	42	95.5	42	95.5	42	95.5	44	100.0	44	100.0	43	97.7	42	95.5	415	93
lig January 92 only			1				1	l	1	i	1	1	1	l	l .	ļ .	1 1	1
Total	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100
Non-reporter	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100.0	34	100
month spell: Jan to Feb	1 1		1 1				1	į		ļ	1	}	1	l)	1	1
Total	5	100.0	[5;	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	, 5	100
Reporter	0	0		_		0			0			20.0	ļ 1		1			20
Mon-reporter	5	100.0	5,	100.0	5	100.0	1 5	100.0	5	100.0	4	80.D	1 4	B0.0	4	80.0	4	BC
wonth spell: Dec to Jan	1 1		1 1		1 - 1		1	•	1	ł	}	ł	1	ŀ	1	1	1 :	1
Total			9;	100.0		100.0		100.0		100.0		100.0		100.0				100
Hon-reporter		100.0	ļ 9	100.0	9	100.0	9	100.0		100.0		100.0		100.0		100.0		100
month spell: Jan to Mar			1		1		1 1	400.0		1000	1		1		! .		1 !	
Total	,		1 1	100.0		100.0		100.0		100.0	1 4	100.0		100.0		100.0		100
Non-reporter		100.0	1 4	100.0	4	100.0	4	100.0	4	100.0	1 4	100.0		100.0		100.0	1 4	100
month spell: Dec to Feb			1 1	•••		100.0	1 1	100.0		100.0		100.0		100.0		100.0	. 4	! ! 100
Total		100.0		100.0		100.0				100.0		100.0		100.0				100
Non-reporter		100.0	1 7	100.0	1	, ,00.0	! -	100.0	•	, 100.0	1 7	100.0		, 100.0	1 7	100.0	1 7	
month spell: Nov to Jan Total	1 1	100.0		100.0		100.0	1 0	100.0		100.0	, ,	100.0	1 0	100.0		100.0		100
		100.0		100.0		100.0		100.0		100.0		100.0		100.0			,	100
wonth spell: Jan to Apr	-	100.0	1 1	100.0				100.0	. •	1 100.0	. •	100.0	\ •	1 100.0		100.0	1	, , .
Total		100.0	20	100.0		100.0	20	100.0	20	100.0	20	100.0	20	100.0	20	100.0	20	100
Non-reporter		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100
month spell: Dec to Mar			1		1						i		i	1	1	1	i	
Total		100.0		100.0	30	100.0		100.0	,	100.0		100.0	30	100.0	30	100.0		100
Reporter			*	0				0				3.3				3.3		İ
Non-reporter		100.0		100.0		100.0		100.0		100.0				100.0		98.7		100
month spell: Nov to Feb					i		i				i		1	1		ì	j	
Total		100.0	22	100.0	22	100.0		100.0		100.0		100.0	22	100.0		100.0	22	100
Reporter	1 0		,	0		•		4.5						,			,	
Non-reporter		100.0	22	100.0	22	100.0	21	95.5		100.0	55	100.0		100.0	22	100.0		100
month spell: Oct to Jan			1 (ł .	1	,	1	1	•	1	}		1	•	Į.		1	
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100
Reporter		3.2		3.2				i 0			•			0				1
Won-reporter	30	96.8	30	96.6	1 31	100.0	31	100.0	31	100.0	31	100.0	31	100.0	31	100.0	31	100

TABLE A-1
ELIGIBILITY SPELLS FOR MATH SIPP - Continued

Universe: Eligible Non-Reporters, Total

i	96	: *	00	T	MO	٧	DE	c		₩	, FE	38	-	٨		R		ί¥
1			į į		!		1		 		(1				1 1	
i	Totel	•	Total	•	Total	•	Total	•	Total	•	Total	•	Total	•	Total	•	Total	
			1 1		1 1		1 1		1		1 (l l		1 1		1 1	
onth spell: Dec to Apr	f		1 1		1 1		1 1		† 1	}	! !		1 1		1 1		1 1	1
(0181	8	100.0		100.0		100.0	3 8	100.0		100.0		100.0		100.0		100.0		100
eporter		12.5				12.5						12.5				12.5		25
on-reporter		87.5						100.0		100.0		87.5				87.5		7
onth spell: Nov to Mar		U	1 1	J. 15			1				,		i		i		i i	1
otel	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	. 2	100.0	2	100.0	ì 2	100.0	2	. 10
on-reporter		100.0		100.0		100.0		100.0	2	,		100.0		100.0		100.0		10
onth spell: Oct to Feb	- ;		1 1		1 3		i -i		1	1	i - i		i		i i		í i	ŧ
181	7	100.0	7	100.0	7	100.0	1 71	100.0	7	100.0	7	100.0	7	100.0	7 7	100.0	7	10
porter		14.3						14.3		,		14.3		14.3	. 0	o	. 0	ì
on-reporter		85.7		75.4		85.7	6	85.7	7	100.0	1 61	85.7	6	85.7	i 7	100.0	7	10
onth spell: Nov to Apr	- 1		i i		1 1		i i		i I	ĺ			i i		i i			Ĺ
otal	9	100.0	9	100.0	. 91	100.0	P	100.0		100.0	I 9	100.0	10	100.0		100.0		10
porter		11.1					0	0	٥	0	1 1	11.1	1 11	11.1	1	11.1	1 1	1
on-reporter	8	88.9		88.9		100.0	j 9;	100.0		100.0	B	86.9	8	88.9	8	68.9		8
onth spell: Oct to Mar			i i		i i		i i		i I	İ	1 1		1 1		1 1		1 1	ŀ
otal	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	1 5	100.0	5	100.0	5	10
on-reporter	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	1 5	100.0	5	100.0	5	10
r Multiple Spells			1		i i		i i		1	i	1		ı i		1		1 3	1
016]	290	100.0	290	100.0	290	100.0	290	100.0	290	100.0	290	100.0	290	100.0	290	100.D	290	10
eporter	16	5.5	10	3.4	7,	2.4	4	1.4	. 0	0	7	2.4	12	4.1	17;	5.9	18	
or reporter	274		280	96.6	283	97.6		98.6	290	100.0	283	97.6	278	95.9	273	94.1	274	

Weighted (in 1000s) for (Universe: Eligible Non-Reporters)

	\$E	:P) 00	:1) » c		DE	:C	رد أ	₩	FI	5 9	i #	₩		**		ί¥
	 Total		! ! Total		 Total	•	 Total	•	 Total	1	 Totel		 Total		 Total	•	i 	
			1 1		1 1				1		!		1 :				1 1	
ote1	6,872	100.0	6,872	100.0	6,872	100.0	6,872	100.D	6,872	100.0	6,872	100.0	6,872	100.0	6,872	100.0	6,872	100
lig Throughout			!		11		1 1		1	l .	I 1		1	1	1 1		1 1	
Total		100.0		100.0	4,418			100.0		100.0		100.0			4,41B		4,418	
Reporter			130:	2.9	108	2.4	61		0				137		174		184	
Non-reporter		96.3	4,289	97.1	4,310	97.6	4,357	98.6	4,418	100.0	4,339	98.2	4,281	96.9	4,245	96 . 1	4,234	95
eft just: Elig Sep to Apr Total		100.0	1 173	100.0	1 470									100.6		100.0	1 1	
					1/3	100.0	1/3	100.0	1 1/3	100.0 0		100.0					1 31	100
Man-reporter					171		171		•	100.0			186			3.8 96.2	170	
aft just: Elig Dep to Mur	1			••••	1 1	•••			1 110	1	1			0.2	, ,	•••.2	1 ,,0	_
Total	129	100.0	129	100.0	129	100.0	120	100.0	129	100.0	129	100.0	129	100.0	129	100.0	129	100
Reporter			6		• .		0										1 41	
Non-reporter			122					100.0					121		,		124	
eft just: Elig Sep to Feb	i i		1		1 1		1			1			1)	1 1		1	
Total	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100
Won-reporter		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.D		100
eft just: Elig Sep to Jan			1 1							1			1	i	1		1	i
Total		100.0	94	100.0	94	100.0	94	100.0	94	100.0	j 94	100.0	94	100.0	94	100.0	94	100
Reporter			3		3		3		0	•			3		3	3.1	3	
Non-reporter										100.D			91				91	
ight just: Elig Oct to May			, ,							l	1		1				1	
Total		100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100.0	155	100
Reporter			1 4;				4	2.4	0								7	
Non-reporter			152	97.6	152	97.6	152		155	100.0	155	100.0	150			95.5		
ight just: Elig Nov to May	i		i i		1 1						1		i	(i	
Total	147	100.0	147	100.0	147	100.0	147	100.0	147	100.0	147	100.D	1 147	100.0	147	100.0	147	100
Reporter		2.7	i 4i	2.7	i 4i	2.7	D				. 0				. 81	5.2	. 6	•
Non-reporter		97.3	143	97.3	143	97.3	147	100.0	147	100.0	147	100.0	142	96.6	139	94.8	140	9
ight just: Elig Dec to May			i i		1		i i		i	í	i		i		1		1 !	
Total		100.0	104	100.0	104	100.0	104	100.0	104	100.0	104	100.0	104	100.0	104	100.0	104	100
Reporter							0	0	0	0	6	6.1				14.7	8	
Non-reporter		100.D	104	100.0	104	100.0	104	100.0	104	100.0	98	93.9	96	91.8	89	85.3	97	9;
ight just: Elig Jan to May			1 1		i i		i i		1	i			İ		i		1	
Total	129	100.0	129	100.0	129	100 D	129	100.0	129	100.0	129	100.0	129	100.0	129	100.0	129	100
Reporter		4.4	6	4.4	. 6	4.4		4.4	0	0	0	0	3	2.3	5	4.1		•
Non-reporter		95.6	124	95.6	124	95.6	124	95.6	129	100.0	129	100.D	126	97.7	124	95.9	123	9:
lig January 82 only	1		! !		1 1		()		1	1	1	l .		1	1		1 1	
Total	87	100.0	87	100.0	67	100.0	67	100.0	67	100.0	87	100.0	87	100.0	87	100.0	67	100
Non-reporter	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100.0	87	100
month spell: Jan to Feb	1 1		1 1				i		1	1	1		1	1	1 1		1 1	ı
Tots1	14)	100.0	141	100.0	[14]	100.0	14	100.0	14	100.0	14	100.0	14	100.0	14	100.0	; 14	100
Reporter	0	0	0 1	0	(0)	0	. 0	0	. 0	0	3	19.0	3	19.0	3	19.0	; 3;	16
Non-reporter	1 34!	100.0	1 14/	100.D	1 14,	100.D	1 14	100.D	14	100.0	11	81.0	1 11	B1.0	: 11	81.0	111	8
month spell: Dec to Jan	1 1		1 1		1 1		1	!	1	1			I	1	1 !		1 1	J
Total	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	23.	100.0	23	100
Non-reporter	23)	100.0	23	100.0	23	100.0	23	100.D	23	100.0	23	100.0	23	100.0	23	100.0	23	100
month spell: Jan to Mar					1 1				1	l	1	!	1	i	1		1 1	ı
Total		100.0		100.0		100.0		100.0	1 10	100.0		100.0		100.0		100.0		100
Mon-reporter	10,	10C .0	10)	100.0	10)	100.0	10	100.0	10	100.0	10	100.0	1 10	100.0	10	100.0	10	100
month spell: Dec to Feb	1 1		1 1		1		1		ŧ	1		1		l	1 1		F	
Total	[11]	100.0	111	100.0	1 11	100.0		100.0	11	100.0		100.0		100.0		100.0		10
Won-reporter	111	100.0	11	100.0	113	100.0	11	100.0	11	100.0	11	100.0	11	100.0	1 11	100.0	11;	10
month spell: Nov to Jan	1 1		1		1 1		1		i	1	1	l	1	1	1 !	1		
Total	23	100.0	23	100.0	23	100.0		100.0		100.0		100.0		100.0		100.0	,	10
Non-reporter	23	100.0	23	100.0	23	100.0	23	100.0	23	100.0	: 23	100.0	23	100.0	53	100.0	23	10
month spell: Jan to Apr					1		i		1	l .	!		1	1	1		! !	•
Total	58	100.0	58	100.0				100.0	58		58	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	58		58			10
Non-reporter		100.0	58	100.0	1 28	100.0		100.0	58	100.0) 28	100.0	1 28	100.0		100.0) 58	10
month spell: Dec to Mar						1 100 0	,	100 0		100.0	1 400	1000	1	,	1 100	100.0		10
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		
Reporter											-		100	, -			1 100	
Non-reporter		100.0	100	100.0		100.0		100.0		100.0	94	94.1		100.0		94.1		10
month spell: Nov to Feb				100.5	77			•	. 77	1000				1 100 0		•	1 77	
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		10
Reporter			•	•									,					
Non-reporter		100.0	:	100.0		100.0	. /4	96.1		100.0		190.0		100.0	1	100.0		1 10
month spell: Oct to Jan			1				!		-	•	!	•	!	1				•
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		10
Reporter								, -										
Non-reporter	76	95.4	78	97.4	80	100.0	1 80	100.0	80	100.0	; 80	100.0	1 80	100.0	1 80	100.0	1 80	10

TABLE A-1
ELIGIBILITY SPELLS FOR MATH SIPP - Continued

Meighted (in 1000s) for (Universe: Eligible Non-Reporters)

!	80	•	į ox	:T) NC	Y) DE	c	į J	w	i PE	28		M	į A	7		ί¥
! !					1 1)		1		1		l l i		1	ı	! 	
:	Total	•	Total	•	[Total	•	Total	•	(Total	•	(Total	•	Total	•	[Total		[Total	•
			1		1 1		1 1						1 1			1		
	1		1		i i		1		1		i i		1 1		i	i	i i	1
month spell Dec to Apr			1		i i		i i		ìii		i i		i i		i	i	i i	ı
7ots1	30	100.0	39	100.0	39	100.0	30	100.D	39	100.0	39;	100.0	30	100.0	39	100.0	39	100
Reporter	3	8.1	3	8.1	3	8.1	0	0	0	. 0	3	8.1	1 3	8.1	3	8.1	16	40
Non-reporter	35	91.9	35	91.9	35	91.9	39	100.0	39	100.0	35	91.9	35;	91.9	35	91.9	23:	56
month spell: Nov to Mar			1 1		1		i i		i i		i i		i i		i		i	
otal	5	100.0	5	100.0	51	100.0	5	100.0	. 5i	100.0	i 5	100.0	. 5 i	100.0	5	100.0	5	100
ion-reporter	5	100.0	. 5	100.0	5 5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0		100
month spell: Oct to Feb	1		1 1		i i		i i		i		i i		i i		!	i	i i	
Totel	18	100.0	10	100.0	101	100.D	18:	100.D	18	100.0	16	100.0	18	100.0	16	100.D	16	100
Meporter	2	14.1	1 4	25.3	2	11.2	2	11.2	0	0	2	11.2	2	11.2	. 0		0	1
Ion-reporter	14 (85.9	12	74.7	14	88.8	14	88.8	16	100.0	141	8.8	14	8.8	16	100.0	16	100
onth spell: Nov to Apr			1		i		i i		i ì		i i		i i		1	(ì	1
lot#1	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	100.0	25	10
laporter	2	9.2	1 2	9.2	0	٥	0	0	0	. 0				8.5	1 2	8.5		1 1
ion-reporter	23	90.8	23	90.8	25	100.0	25	100.0	25	100.0	23	91.5	23	91.5	23	91.5	23	9
onth spell: Oct to Mar !			1 1		i i		i i		i		i i		i i		i	İ	i i	1
ots1	15	100.0	1 15!	100.0	151	100.0	1 15	100.0	15	100.0	15	100.0	15	100.0	15	100.0	15	100
on reporter	15	100.0	15)	100.0	15	100.0	15	100.0	15)	100.D	1 15	100.0	15]	100.0	15	100.0	1 15.	10
er Multiple &pells			1 1		1 (1		ı İ		i i		(i		ĺ	1	1 1	ı
otal	854	100.0	854	100.0	854	100.0	854	100.0	854	100.0	854	100.0	854	100.0	854	100.0	854	100
leporter	42	4.9	27	3.2	20	2.3	11	1.2	0	0	17	2.0	29	3.4	51	6.0		
Non-reporter	812	9 5.1	B27	96.8	834	97.7				100 0	837		825				-	94

	**	:P	1 00	T	100	>v	į Di	EC	J.	MH.	F1	EB	. 	W A	, N	4	į w	LY.
	 		 Totel	•	 Total	•	 		 Total		 Total		 Total		i Total		 Total	
	i ;				! I] 	l i	I	 	1 1	 	1 1			
ote1	254	100.0	254	100.0	254	100.0	254	100.0	254	100.0	254	100.0	254	100.0	254	100.0	254	100
ptr Throughout Total	 116;	100.0	1 116	100.0	i 116:	100.0	116	100.0		100.0	!	100.0	1	 100.0	! !!	100.0	1 116	100
Eligible				29.3	29				1 01				22		24			
Ineligible				70.7		75.0			118				P4		92	79.3		80
eft just: Rotr Sep to Apr	i i		1 1		1		i i		i i	i	ì i	i	į į	i	i i		į i	
Total		100.0	9;	100.0					9	100.0	1 91				9	100.0	9	100
Eligible			3	33.3	•					0			2					
Ineligible		77.0	6	66.7	1 7	77.8	7	77.8		100.0	7	77.8	7	77.B	7,	77.8	P	100
eft just: Aptr Sep to Mar Total		100.0	1 11	100.0		100.0	1 11	100.0	(100.0	() 11	100.0	(; (11)	100.0		100.0	i i	100
Total Eligible				18.2	31				ויו ן ניס ו				4				35	
Ineligible		54.5	9	81.8	8				111		•		7	,	8			
eft just: Aptr Bep to Feb			i i		i i	,			1 1	1			,			, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	
Total	6	100.0	6	100.0	6	100.0	6	100.0	. 6	100.0		100.0			6	100.0	j 6	100.
Eligible			0	0	0	C					1				1 1			
Ineligible		66.7	61	100.0	6	100.0	6	100.0	6	100.0	5	83.3	1 5	83.3	5	83.3	4	86
eft just: Aptr Bep to Jan	1		1		i l		! !		1 1	1		1	!	1	1 1	l	i	
Total				100.0			12			100.0		100.0	1 12		12		,,	
Eligible			6	50.0									6				,	33
Ineligible	7	58.3	6	50.0		83 .3	. 8	86.7	12:	100.0	; B	86.7	1 6	, 50.0		50.0	. 8	8 6
ight just: Rptr Oct to May Total	. 8	100.0	1 8	100.0	 		! 	100.0] [1 1 100.0	i 1	 100.0	. 8	100.0	. 6	100.0	i ! 1 6 !	100
Eligible			21	25.0	0 : 1:		, -		. 0				-		. 2			
Ineligible				75.0														
ight just: Rptr Nov to May			, ,				1 1				1		1	1				
Total		100.D	í e	100.0	8	100.0	8	100.0	, 8	100.0	. 8	100.0		100.0	. 8	100.0		100
Eligible		12.5	0	D	D	0		0	0	0	0	. 0	1	12.5	2	25.0	2	25.
Ineligible	7	87.5	B	100.0	. 8	100.0	8	100.0	8	100.0	8	100.0	7	87.5	1 6	75.0	6	75.
ight just: Aptr Dec to May	1		1 1		1		,		1 1	1	ļ	i	l	!	1 !	1	(
Total	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	1 5	100.0	1 5:	100.0	5	100
Eligible			! 0	0	2				0				5		2			
Ineligible	4	80.0		100.0	3	60.0	1 3	80.0	5 5	100.0	3	60.0	3	€0.0	3	€0.0	3	8 0 .
ight just: Aptr Jan to May	!				i 8:		! !		! !		! _ !		! -		. 8		: 8	100.
Total		100.0 37.5		100.0 37.5	1 2	100.0	8		(8;		•	,	8 3					37.
Eligible					∠: 6	25.0 75.0			i Bi			'	1 5					
month spell: Jan to Feb		G2 . 5		u . 3	1	73.0	1	20.0		1 100.0		1 13.0		[u		 ,3	1 1	٠
Total	7	100.0		100.0	7	100.0	7	100.0	7	100.0	7	100.0	1 7	100.0	7	100.0	7	100.
Ineligible				100.0		100.0						100.0	7			100.0		
month spell: Dec to Jan			1 1		1				i i		i						i i	
Total		100.0	2	100.0	2:	100.0	2	100.0	2	100.0	2	100.0	2	100.0	. 2	100.0	2	100.
£ligible	0;	0	0	0	11	50.0	1		0	. 0	0	0	. 0	. 0	i; 0	0	. 0	
Ineligible) 2)	100.0	2 !	100.0] 13	50.0	į 1	50.0) 2	100.0	1 2	100.0	1 5	100.0	5	100.0	2	100.
wonth spell: Jan to Man	1		1 1		1		1 1		1 1	l	1	ŀ	1	1	1 1		1 1	
Total				100.0		100.0	4			•			1 4					100
Eligible				25.0	1 1		0				, -		2		2		1 1	
Ineligible			3	75.0	3	75.0	4	100.0	1 4	100.0	. 2	50.0	2	50.0	1 2	50.0	3	75.
month spell: Dec to Feb	! !		1 1	100.0		100.0	1	100.0	!	i ibo n		100.0) 100.0		100.0) . [1]	100
Total		100.0		100.0									1 0					.00
Ineligible				100.0	, -,			100.0	1 11								1 11	100
Bonth spell: Nov to Jan	· '!		1 1		. '		1 1		1		i	i	i '		i i		, ,	
Total	! 2	100.0	i 2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	2	100
Eligible			1	50.0	0								0		0	0	. 0	
Ineligible		50.0	1	50.0	21	100.0	1 2	100.0	(2)	100.0	(2	100.0	2	100.0	(2	100.0	2	100
month spell: Jan to Apr	!!		t l		1 1	١.	1		1 1	1	1	1	1	[1	l	1	1
Total		100.0		100.0				100.0		100.0		100.0		100.0		100.0		100
Eligible								22.2										
month spell: Dec to Mar		77.8	7	77.8	1 9:	100.0	7	77.8	; 9 	100.0	8	88.9	. 6	98.9	1 8	B8.9	. 9	100
Total		100.0		100.0	, ! a:	100.0		100.0	, a	100.0	, <u> </u>	100.0		100.0	. 8	100.0		100
Ineligible		100.0		100.0		100.0				100.0		100.0		100.0		100.0		100
month spell: Nov to Feb		, ,55.5	1 1		,		i			, I		1				1		
Total		100.0		100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5	100.0	5.	100
Eligible								20.0	,			20.0	, ,					
Ineligible	j 4 j					80.0	1 4	80.0	5	100.0			1 4	80.0	5	100.0	5	100
month spell: Oct to Jan		i	1 1				1	١.	1 - 1	1	1	1	1	1	i	l	ļ į	
Total						100.0		100.0		100.0		100.0		100.0		100.0		100
Eligible							-						1					
Ineligible		100.0	! 5!	100.0	5	100.D	1 5	100.0	1 5	100.0	4	80.0	1 4	80.0	1 4	80.0	4	80.

TABLE 2
REPORTING SPELLS FOR MATH SIPP INCLIGIBLE REPORTERS - Continued

Ineligible Reporter in Jan 82, Total

!	*1	P	. ~	:1		v		€¢	, ,,	NH.	FI	28		•	i ~			A Y
!			1		(1						l		l 1		[
	Total (•	Total	•	Total	•	Total	•	Total	•	Total	•	Total	•	Totel :	•	Total :	1
			1		!		<u> </u>	!					i !		1		1	;
month spell. Dec to Apr			1					1		l I			1 1	1	1 1	i i	1	1
Total	3	100.0	3	100.0	3	100.0		100.0	3	100.0		100.0	3	100.0		100.0	3	100.
Eligible										,	,							33.
Ineligible	2					100.0	1 -	100.0	-									66
month spell: Nov to Mar	•		1				i	1		1				1	-		1	
Total	2	100.0	2	100.0	, ,	100.0	, ,	100.0	2	100.D		100.0	2	100.0	2	100.0		100.
Eligible							•	50.0			-							
Ineligible		100.0						50.0				100.0		100.0				100.
month spell: Oct to Feb	- 1		1				; `	1	-	1	1	,		1	1 .	1		1
Total	31	100.0	3	100.0		100.0		100.0	3	100.0	3	100.0	3	100.0		100.0	. 3	100
£1101010						33.3		33.3							•	33.3		
Ineligible	2															•	•	100.
month spell: Nov to Apr	- 1		ì		1	•••	1	1	,				1		i		; -	1
Totel	2	100.D	. 2	100.0	. 2	100.0	. 2	100.0	. 2	100.0	2	100.0	2	100.0	2	100.0	, ,	100.
Ineligible	-	100.0		100.0		100.0	•	100.0	•			100.0		100.0		100.0		100
month spell. Oct to Mar			1		1		i)		 I		1		1		1	i	1
Total	3	100.0	3	100.0	3	100.0	3	100.0	,	100.0	. 3	100.0	3	100.0	3	100.0	. 3	100.
Eliquble		33.3						33.3								33.3		
Ineligible						100.0		66.7				100.0		100.0	2	86.7	ì à	
her Multiple Spells	- 1		1 1				· -	1	i					1			i -	
Total	15	100.0	- 15	100.0	15	100.0	1 15	100.0	15	100.0	15	100.0	15	190.0	15	100.0	1 15	, . 100.
Eligible		40.0						40.0					5			4D.D		
Ineligible								80.0		100.0			10					40.

Meighted (in 1000s) for (Ineligible Reporter in Jan 82)

	90	EP	i «	τ	i #	DV .	DI	EC	بر	NH.	j F 1	EB.	i w	•	۱ ۸	*	<u> </u>	AY
	 Total		 Total	,	 Total		 Total		Total		 Total		 Total	,	 Total		 Totel	
					1		i i	•	j ·		!]		1		1	
ots1		100.0	677	100.0	677	100.0	•	100.0	677	100.0	877	100.0	677	100.0	677	100.0	677	100
ptr Throughout Total	1 1211	100.0	i ;	100.0	321	100.0	1 321	 100.0	100	100.0	 9 21	l 100.0] 321	100.0	! 1 211	100.0	321	 1000
Eligible			(85	26.5	75		62				-		53				1 6 6	
Ineligible	221	66 .D	236	73.5	246	76.8	258	80.6	321	100.0	272	85.0	267	63.3	253	79.0	254	79
eft just: Rptr Sep to Apr	1 1		11		1		1 :	1 :		١	l :	1	1 1		1 -		1 1	ı
Total			1 29			100.0 27.4	29		29	100.0	1 29		29	100.0 26.4			29	
Eligible	22		. ,	81.3		72.6	22		-				6 21				-	100
eft just: Rptr Sep to Mar			1		1			10.4	1	1	1	1	1		1		1	
Total		100.0	30		30	100.0	30	100.0	30	100.0	30	100.0	30	100.0	30		30	100
Eligible			1 4	13.0	0.				0		1 15		11				11	
Ineligible			26!	87.0	22	74.7	22			100.0	15	50.9	191	64.4	22	72.6	19	
eft just: Aptr Bep to Feb	17	100.D	1 17	100.0	1 17	100.0	l (17)	190.0		100.0	1 17	100.0	1 17	100.0	1 17	100.0	1 17	 100
Total			0	0			0	0					, ,,, [3]	20.1	, ,,, 3		7	
Ineligible	11		17	_		_	17						14				1 11	
ert just: Aptr Sep to Jen	i		i i		1 .		i i	i :	i i	l	ı	l	1 i		ı i		i i	
Total		100.0	31			100.0	31			100.D		•		100.0				100
Eligible				49.7			11						16				10	
Ineligible	17	55.8		50.3	24	76.8	20	64.3	31	100.0	23	74.7	15	47.3	18	57.5	21	64
ight just: Aptr Oct to May	20	100.0	30.	100.0	1 20	100.0	30	100.0	20	100.0	: 2n	100.0	20	100.0	20	100.0	20	10
Total							1		0	•	,		5				8	
Ineligible			1 16	79.4							18		14				11	
ight just: Aptr Nov to May	1		i i		i i		i	i		1	i		1		i i		i i	i
Total	18	100.0	18	100.0	18	100.0	18	100.0	18	100.0	18	100.0	18	100.0	18	100.0	18	100
£ligible	2		1 01	. 0			0		0								5	٠
Ineligible		86.3	18	100.0	18	100.0	18	100.0	18:	100.D	1 18	100.0	15	86.3	13	72.7	13	. 72
ight just: Aptr Dec to May :: Total	22		1 22/	100.0	/ 33/	100.0		100.0	23	100.0	l 1 23	100.0	. 22	100.0	23	100.0	/ 22	1 . 100
Total Eligible		100.0		100.0		23.9	5		23				; 23; I 51				5	
1neligible				-			17				17		17;					
ight just: Aptr Jan to May			1 1		i i	i	i	İ	1	i	i	1	, ,	i	i i		1	1
Total	22	100.0	22		22	100.D	55			100.0				100.0				100
Eligible			10	44.8	6						7						8,	
Ineligible		55.2	12	55.2	16	72.7				100.0	15	69.6	13	58.7	131	58.7	13	61
month spell: Jan to Feb	15:	100.0	∤ ! I 15⊺	100.0	; ! 15	100.0	15			100.0	! 15	i 100.0	15	100.0	! ! ! 15!	100.0	1 15	! ! 100
Total		100.0	15			100.0		100.0		100.0				100.0		100.0		100
month spell: Dec to Jan			1 1	100.0				100.0	1	1	1	100.0			1 1	700.0		1
Tote)		100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100
Eligible		0	0	0	1 3	82.2	3	82.2	0	0	0	0	0	0	, 0	0	i 0	i
Ineligible	3 '	100.0	3	100.0	1 1	17.B	1	17.B	3	100.0	3	100.0	3:	100.0	1 3;	100.0	3	100
month spell: Jan to Mar			i l			1	1		l :		1		1!		1		1	!
Total			11			100.0					11		(11 ₁		11; 5		111	
Eligible		100.0		17.0 83.0	; 2		D 11		111	0 100.0			1 6			56.0) 3	27
month spell: Dec to Feb		100.0		65.0		. w	1	1		100.0	i .	, 30.0	1	30.0	1	30.0		
Total		100.0	2	100.0	2	100.0	2	100.0	2	100.0	· .	100.0	2	100.0	2	100.0	2	10
Eligible				0	. 0	0	0	0	0	0	2	100.0	. 0	0	0	О	0	
Ineligible	2	100.0	2	100.0	2	100.0	2	100.0	2	100.0	. 0	. 0	2	100.0	2	100.0	2	100
month spell: Nov to Jan			1 1		1 1	١	1	ļ	1	l	I	l	1 1		1		1	
Total		100.0	1 4	100.0	4	100.0			4				4			100.0		100
Eligible		25.1 74.9		25.1 74.9	0 4			100.0			, -	; 0 ; 100.0		0 100.0	-			10
Ineligible month spell: Jan to Apr		74.0		74.0	, -	1	•	1	, ,	100.0	, ,	, 100.0 I	1	1 100.0	1	100.0	1 -	1
Total		100.0	24	100.0	24	100.0	24	100.0	24	100.0	1 24	100.0	24	100.0	24	100.0	24	10
Eligible		28.3						28.3		0				13.5		13.5		ĺ
Ineligible		71.7	171	71.7	24	100.0	17	71.7	24	100.0	20	B6.5	20	86.5	20	96.5	24	10
month spell: Dec to Mac			1 (!		!		1		1		!		!			1
Total		100.0		100.0		100.0		100.0		100.0	20			100.0		100.0		. 10
Ineligible		100.0	20	100.0	20	•	, 20	100.0	. 2 0	1 100.0	1 20	100.0	20	100.0	, 20	100.0	1 20	10
Total		100.0	111	100.0		100.0	1 11	100.0	11	100.0	į 11	100.0	111	100.0	111	100.0	11	10
Eligible		13.7		13.7	,	13.7		13.7				13.7		13.7				
Ineligible		86.3				86.3		86.3		100.0						100.0		10
month spell: Oct to Jan			1		1		1	•		1	l		1 1		i I		İ	ı
Total		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100
Eligible			0		,				,			12.0		12.0				1 17
Ineligible	111	100.0	1 113	100.0	11	100.0	; 11	100.0	11	100.0	. 9	88.0	i 9:	98 .0		98.0	1 9	8

TABLE 2
REPORTING SPELLS FOR MATH SIPP INCLIGIBLE REPORTERS - Continued

Weighted (in 1000s) for (Ineligible Reporter in Jan 82)

į	867		oct) #0V		l DE C		HAL		i FEB		-		APR		I MAY	
 	Total :		Total		 		 Totel	1	Total		 Total	•	l Total		(•	 	
			1		-													
	1		1		! ! !		i	1			, , , ,		1	i	1 1		1 1	
month spell: Dec to Apr	i		i	i	} !		í	i		i	i i		į	i	i i		j i	
Total	7	100.0	7	100.0	71	100.0	1 7	100.0	7	100.0	7	100.0	7	100.0	7 7	100.0	7	100.0
Eligible	4	48.1	4	48.1	0	0	. 0	; 0	. 0	0	2	28.6	2	28.6	1 2	28.6	2	28.6
Ineligible	4	51.9	1 4	51.9	7	100.0	7	100.0	7	100.D	5;	71.4	1 5	71.4	[5	71.4	5	71.4
month spell: Mov to Mar			1	l	i 1		i	1	l	1) 1		I	t .	1 1		1 1	i
**************************************	3 .	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0	3	100.0
Eligible	0	C	0	0	[1]	43.1	1 1	43.1	0	0	0	0	, 0	, 0	0	. 0) D;	1
Ineligible	3	100.0	3	100.0	2	56.9	2	56.9	3	100.0	3	100.0	3	100.0] 3	100.0	3;	100.
month spell: Oct to Feb			1	İ	1 1		1	ł		l	1 1		Ť	1	1 1		1	l
Total	7	100.0	1 7	100.0	1 71	100.0	7	100.0	7	100.0	7	100.0	7	100.0	7	100.0	1 7	100.
Eligible	3	36.6	3	36.6] 3)	36.6	3	36.6	D	0	5	72.9	5	72.9	3	36.3	0	1
Ineligible	5	63.4	5	63.4	5	63.4	1 5	63.4	7	100.0	2	27.1	. 2	27.1	5	63.7	71	100.
month spell: Nov to Apr			1		[]		1	I	1	l	1		1	1	1 1		1 1	I
Total	8	100.0		100.0	6	100.0) 6	100.0	. 6	100.0		100.0	6	100.0	. 6:	100.0	I 6;	100.
Ineligible		100.0) 6	100.0	0	100.0		100.0) 8	100.0	1 61	100.0	. 6	100.0	0	100.0	61	100.
aonth spell: Oct to Mar 😑	1		1	l	1 1		1	1	1	l) [1	[1 1		1 1	
Total	•	100.0	. 8	100.0	8	100.0	. 8	100.0	. 8	100.0	8:	100.D	. 8	100.0	e;	100.0		100.0
Eligible	3	34.7	. 0	0	0:	0	3	34.7	. 0	0	0	0	, 0	1 0	3	34.7	1 31	34.
Ineligible	5	65.3	B	100.0	6	100.0	5	65.3	ŧ 8	100.0		100.0		100.0	1 5	65.3	1 51	65.
Other Multiple Spells	1			!	1 1		1	ŧ.	F	l	1 1		1	1	! ;	i	1)	1
Totel:	35	100.0	35	100.0	35	100.0	35	100.0	35	100.0	35	100.D	35	100.0	35	100.D	35	100
Eligible	13.	38.4	1 12	35.5	: 15	44.6	1 12	34.7	0	0	8:	23.4	13	36.9	15	44.4	22	62
Ineligible	21	61.6	22	84.5	19.	55.4	: 23	. 65.3	35	100.0	26	76.6	22	63.1	10	55.6	13	37.5